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# GLEANINGS IN BEE CULTURE

MARCH, 1918

## EDITORIAL

IT IS NOW authoritatively announced by the U. S. Food Administration that beekeepers are to be allowed the sugar necessary for feeding their bees. This announcement is made in the following public bulletin just issued, signed by C. W. Holman, the official in charge:



### Sugar for Feeding Bees Now Assured.

The Food Administration, trusting in the industry of the bee, has decided that even in the face of a world sugar scarcity bees are entitled to their share. Beekeepers throughout the country have been reporting to the United States Food Administration their inability to secure sugar with which to prevent starvation among their colonies. Last season was a particularly unfavorable one. Owing to droughts and failure of clover and other crops in some sections, the bees were unable to store sufficient food to carry them thru the winter. Under such conditions a syrup made from white granulated sugar is needed to feed them. Any other kind of food, except when bees are flying frequently, tends to produce a condition of the bees known as dysentery. But some dealers fearing they might violate rules or at least the spirit of the Food Administration, have hesitated to deliver sugar to beekeepers. In handling this problem the Food Administration has not only authorized but encouraged the delivery to beekeepers of a sufficient quantity of sugar to meet urgent bee feeding requirements. Dr. E. F. Phillips, Apiculturist of the United States Department of Agriculture, estimates that every pound of sugar now fed to starving bees will result in the production of at least 10 pounds of honey next season. In many cases the increase will greatly exceed this.

C. W. Holman.

We interpret this official bulletin to mean that the beekeeper in need of sugar to feed his bees can show a copy of this bulletin to his nearest wholesaler or retail sugar dealer, and, upon satisfying the dealer that he is a beekeeper in need of feed for his bees, can get all the sugar he wants, provided the dealer has the sugar. More than this, we interpret the bulletin to mean that the wholesaler or retail sugar dealer can secure an extra allotment of sugar for supplying the beekeeper. We suggest that the beekeeper's demand be made as moderate as possible and to cover only actual necessity of certain colonies that are running short of stores. One or two pounds of sugar per colony will probably tide them over until fruit bloom or other source of honey. If necessary later, more sugar can be obtained for feeding purposes.

In case sugar cannot be obtained of your

local dealer, write to Gleanings and we will try to tell you how to proceed and where you can get the sugar. But impress upon your local dealer the fact that he will be allowed a special allotment of sugar for the use of beekeepers and that he can get it for you on this claim if he will.

Elsewhere in this issue will be found full directions for making candy for feeding providing the weather is cold. In case the bees can fly two or three days a week, ordinary thick sugar syrup should be given.

In case your dealer can not supply you with sugar and the weather is warm enough so bees can fly two or three times a week, cane molasses may be given, and there is no doubt that the permit as above given would authorize the distribution of molasses or any other form of sweet.

In a few localities maple sugar or maple syrup can be given to bees. The ordinary evaporated maple syrup is nearly equal to granulated sugar syrup.

In case sugar has to be obtained from a distance, where the quantity is not large, we would advise having it sent by parcel post. Go to your local postmaster and have him tell you how much extra you will have to send to cover postage from dealer to you. Sugar should be furnished probably at the prevailing rates, somewhere around 9c or 10c a pound.

It is perhaps unnecessary to remind our readers that a severe punishment in the way of fine and imprisonment will be meted out to anyone who buys sugar for feeding bees and then uses it for other purposes. For that reason no more sugar should be purchased than is absolutely required for the purpose of feeding.

Later.—Some press notices seem to indicate that there will be plenty of sugar within the near future; but from an interview that the editor of Gleanings had with the Ohio Department of the U. S. Food Administration at Columbus, on Feb. 16, we are convinced that there will be a sugar shortage in many states lasting till the next honey flow, and that some definite arrangements should now be made to divert sugar exclusively for the use of beekeepers to some central point in each state. With that end in view, we made arrangements with the Ohio Food Administration, Sugar Division, to buy some 7,000 pounds of sugar. This

sugar is to be placed in the hands of the secretary of the Ohio State Beekeepers' Association, Prof. Jas. S. Hine, of Columbus. While this amount of sugar may not take care of Ohio beekeepers, more can be secured, doubtless, if needed. Prof. Hine has kindly consented to disburse this sugar to beekeepers who make application direct to him, care of the Ohio State University at Columbus, in amounts equal to a pound of sugar per colony, for only such colonies as are actually running short of stores. The sugar will be furnished at cost, plus wrapping and postage when sent by mail, but cash in every case must accompany the order. Beekeepers within reach should go after the sugar by train, by trolley, or by automobile. On account of the congestion of freight or express, the sugar may have to be obtained thru parcel post, if the beekeeper cannot secure it in person. If the sugar is needed at once, don't order by freight or express. Go after it or have it sent by parcel post. Your postmaster can tell you how much extra remittance to make for postage.

It is to be remembered that sugar from Columbus (diverted for beekeepers' use by the Ohio Department of the U. S. Food Administration) can be furnished to Ohio beekeepers only. Each state must take care of its own beekeepers, as we now understand it. But what Ohio has done other states can and should do at once. The Editor of Gleanings expects to go to Washington on a special trip to see if some similar arrangements can not be effected with every state in the Union where there is any considerable number of beekeepers needing sugar. In the meantime you are urged to write to the state division of the U. S. Food Administration at your state capital to furnish you sugar for your immediate needs. If you can not make satisfactory arrangements locally, write to us. We may (or may not) be able to help you—but we will try to do so.

MANY COLONIES went into winter quarters last fall short of stores on account of



### Winter Feeding and Disturbance.

the fact that it was impossible to get sugar just before the bees were put away for the winter. There are hundreds and perhaps thousands of beekeepers who fear that even before spring some of their colonies will starve, and they would like to feed them during mid-winter. There are others who hold that winter disturbance will do more harm than good; that opening up a colony during mid-winter will so arouse it that it would not get back to normal and the result would be dysentery by spring.

Feeding sugar syrup during mid-winter or cold weather would be worse than useless as it should only be given when the bees can fly, once or twice a week. Hard candy, or, in fact, any kind of candy, is better to

give a colony of bees in winter or early spring than syrup. The best food of all is frames of natural sealed stores. During cold weather a comb of such stores, if necessary to give, should be laid flat on top of the brood nest, because it is not advisable to break the cluster. Whether a comb of natural stores or a cake of candy is given, the seal should be put on top. A couple of cleats of wood should be laid across under the comb or candy, and a couple on top, after which the packing is put over.

Almost any candy can be given to bees, but the hard candy that has given us the best results is that made from granulated sugar, and nullomoline, which is an invert sugar having a composition quite similar to that of honey. The object of using this invert sugar is to prevent the candy from scorching. It can usually be obtained from the Nullomoline Co., New York, but when for any reason it cannot, the same recipe may be employed by using at least four parts of sugar to one of water. This candy is made as follows:

The sugar used in this recipe is composed of 1 part of nullomoline to 12 parts of granulated sugar. Into a dish of hot water on the stove slowly pour and constantly stir as much of this mixed sugar as will readily dissolve before boiling commences (about four to one). If any remains undissolved, it is likely to burn, injuring the flavor of the candy and thus causing the bees to have dysentery later. The sides of the vessel should be wiped off frequently to prevent particles of candy from hardening there and scorching. If one has a candy thermometer, bring the temperature to 275 degrees. If no thermometer is available, watch the candy very closely, testing frequently by dropping a very little of the syrup into cold water (about 50 to 55 degrees F.). When the boiling has continued long enough, the drop of candy, after cooling in the water, should be hard and brittle when taken out; but when placed in the mouth it should soften slightly. When the right stage is reached, pour the syrup immediately into paper plates or other paraffined or waxed dishes that hold the required amount for one feeding, making the cakes about 1/4 inch in thickness. When cold the candy should be amber in color, hard and glassy, and perfectly transparent.

A regular fondant, using glucose and powdered sugar has been recommended by Dr. Gates of the apicultural school at Amherst, Mass. This is generally known thruout New England as Fuller's candy. It is made as follows:

Take of granulated sugar 12 lbs.; glucose, such as the candy-makers use, 1 1/2 lbs.; water, 1 1/4 quarts; cream of tartar, 1/3 teaspoonful. The cream of tartar, water and glucose are put together in a kettle and heated. As soon as the mixture comes to a boil, the sugar is added little by little until it is all incorporated. During the process of adding the sugar the candy is continually

stirred. When the boiling-point is reached again, the stirring is discontinued. When the temperature reaches 238 by a candy-mixer's thermometer, the mixture is removed from the stove and allowed to cool. When it cools to 120 it is stirred again until it begins to "cream." As soon as it looks like paste or starch, it is ready to use.

In case the beekeeper is unsuccessful in securing sugar, either with or without a permit from the Food Administrator of his state or other official source, he may be able to get common cane molasses, or, he may be able to purchase a cheap candy. In either case, such food should not be given unless the bees can fly at least twice a week. By the first of March the bees will be able to get out of the hives occasionally in most of the Northern localities.



**THE CONTINUOUS** cold winter that has prevailed thruout the eastern section of the



**Some  
Warnings and  
Suggestions.**

country and Canada and as far south as Florida, has caused considerable apprehension among bee-

keepers. Where colonies were put in single-walled hives in the northern states and left outdoors the mortality will be considerable. On the other hand, where the bees have been put in cellars, or been well packed outdoors, the losses will probably not exceed that of former years, providing there are sufficient stores to carry them thru until spring, and providing also that their entrances have not been clogged with snow and ice.

In the states south of the Ohio river, where bees are left outdoors in their summer hives without packing, the estimated mortality will be from one-third to one-half. In the states bordering the Gulf and southern sections of the United States the losses will be heavy in bees and brood. While these losses may not involve colonies, they will reduce the strength of them so that they will be in bad condition to breed up in the early spring. Should this be true, it will be unfortunate because the demand for bees in package form will be the largest this year that has ever been known in history, and there is a possibility and probability that our Southern breeders will be seriously handicapped in supplying the demand. This would mean they would have to cancel some orders and possibly delay others that they do fill.

Thruout the Northwest bees are wintering well, as the winter has been very mild. As the West provides the great bulk of carload shipments, Western honey will be very much in evidence this coming summer, whether clover honey is produced in the East or not.

The great danger in the East from wintering this year, especially in case of no upper ventilation, will be due to shortage of sugar to feed, and to entrances clogged with ice or snow. At one of our yards during a severe snow storm the entrances of some of the colo-

nies were filled full of snow and sleet. The warm breath of the bees thawed this, and then the snow water froze, sealing the entrances hermetically. Out of 70 colonies at one yard 19 were found dead where the entrances were thus sealed. At most of the other yards wintering up to date, Feb. 7, appears to be excellent. Colonies in DeMuth packed hives are showing up well, as well as those in the Government winter-packed cases. The latter have the decided advantage over the DeMuth in that the entrances do not clog with ice. The summer stand entrance catches snow which melts and then freezes. The Government winter cases, four colonies to the case, have their entrances about eight inches above the ground with no ledge to catch the snow or ice, with the result that these entrances are free from ice and snow.

In most cases, colonies in good cellars will winter well. The danger will be that the low temperature outside will cause a great drop inside the cellars, in which case there will be more or less dysentery and consequent loss.

The great danger that confronts every beekeeper this winter is shortage of stores and the difficulty of securing sugar to feed in the spring. The reader is requested to see editorial on this subject on the first editorial page.

Later.—Since writing the foregoing, we have gone over all our bees, and, except for those at the basswood apiary, where there was a heavy windsweep that filled the entrances with snow that froze, we had very little loss—not exceeding two per cent, with the rest of the bees in good condition. Reports of other beekeepers in the locality are equally good. We have also had some reports from the extreme North and West, which indicate that the winter losses are not going to be nearly as heavy as was at first feared. A report from south of the Ohio river shows that the losses will not be above normal, altho it was feared they would go above 50 per cent. Fortunately, warm weather came on Feb. 14, in the nick of time to give the outdoor bees in the country a flight. The weather map shows that this warm spell was general thruout the Northern and Eastern States. This, of itself, will be worth many thousands of dollars to the beekeeping industry.



**FROM PRESENT** indications, there will be a large business in combless packages of bees this coming



**Getting Bees  
Out of Pound  
Packages.**

spring. Even among the larger beekeepers there have been heavy losses which

must be replaced before the opening honey-flow. Ordinarily one is able to buy from neighboring apiaries; but this year many of the small beekeepers will be entirely eliminated as far as selling any bees is concern-

ed. Therefore, the large as well as the small beekeeper will soon be re-stocking his apiary with combless packages of bees. To insure best results from these packages certain precautions should be taken.

If the bees arrive at night too late to put them into the hive, paint the outside of the cages with thin sugar syrup. This should be done a few times until the bees have filled themselves. Don't put them in a hot room over night, but keep them in as cool a place as possible.

If the bees arrive during the day they should be released at once into a prepared hive, which should, if possible, contain a frame of brood from some other colony. If brood is lacking, empty combs may be used, or even frames of foundation if nothing better is available. In the latter case it is always advisable to put a piece of perforated zinc or queen excluder over the entrance to prevent the bees from swarming out the next day. In fact, package bees should always have such zinc over their entrance for a few hours anyway, until they become accustomed to their new home. Some pound-package men always supply a piece of perforated zinc with the cage and this can usually be found wrapped with the directions.

To release the bees, apply a little smoke and remove the wirecloth from one side. As a general rule, the bees for several hours show no inclination to desert the cage. Accordingly, as many as possible should be shaken out onto the combs. If free of bees, the cage may be taken away entirely; if not, after closing the hive, the cage may be placed in front of the entrance, leaving the bees to gradually join their comrades in side.

After the bees are in place they should be fed two or three pounds of a thin sugar syrup until they are well supplied; after this about a half pound a day for one or two weeks. Of course, if they arrived during a honey-flow, they might not need feeding for more than two or three days.

If bees arrive in bad condition so that only a few of them are left, their queen should be caged and left in the hive. They should also be given a frame of brood with adhering bees, providing the bees can be obtained from some other hive. If they arrive in good condition, they should be let out into a hive at once, the few dead bees being separated from the live ones.

As soon as possible, one should find the queen to determine whether or not she has arrived in good condition. If found dead, the fact should be reported to the shipper immediately.



SOMETIMES A BEGINNER will look in at the top of an out-door winter colony, and, seeing the bees



When Bees Are Wintering Well.

scattered all over the brood-nest, just as they are in summer, will jump to the conclusion that the colony is wintering well. If they seem to be pretty lively dur-

ing the midst of severe winter weather, it's a bad sign. A colony that has broken its cluster will be almost sure to have dysentery and die even before spring, or before settled weather comes on so that it can recover itself.

A normal colony that is wintering well outdoors should be in a compact cluster, anywhere from three inches to eight inches in diameter, depending upon the temperature outside and the size of the colony the preceding fall. When the cluster, or ball, of bees seems to be quiet, the condition is favorable.

When the bees are in the cellar they will be in the form of a cluster at the beginning of the winter and gradually expand as spring comes on. If the cellar is very warm, with plenty of ventilation, the bees may be scattered pretty well thru the hive and still be wintering well. Dead bees on the cellar bottom do not necessarily indicate bad wintering, but if there are hives in the cellar stained with brown markings of dysentery near the entrances, such hives should be removed and their bees given a flight. If the bees appear to be uneasy, flying out on the cellar floor pretty often or, if colonies are roaring, it will be well to put all the bees out doors the first warm day that comes. They would do better outside than inside when marks of dysentery begin to show.



LAST SUMMER, owing to the early spring and summer rains, there was a great abundance of clover. This was followed by very dry weather. Had there

not been heavy snows early this winter, these young clovers might have died. The fact that practically the whole clover area of the United States has been covered with deep snow for months at a time will probably insure a crop of clover this coming summer. Were it not for the fact that some winter losses are predicted for the eastern states and that surviving colonies will be weak, we would expect a record-breaking crop of clover honey the coming summer, other conditions being favorable. At this writing, Feb. 18, the expected rains for Southern California have not arrived. Unless they come before Mar. 1 there will not be much sage honey. Prospects there are poor.

Conditions in the Rocky Mountain region have been very good for an alfalfa crop. With prospects looking good for clover in the East, 1918 should not fall greatly below former years in honey production, if it does at all.

We are in hopes that the present predictions of winter losses will not materialize in the East, but even should there be a heavy mortality among the bees, there will probably be a good crop of clover honey next season.

If our Southern beekeepers can supply bees in pound packages, the Northern beekeepers will make up for their winter losses by purchasing bees from this source.

IT has been said that bees "work for nothing and board themselves." Sometimes it's true, and sometimes it isn't. If there ever was a man

who has worked out that principle and carried it thru to where the owner himself does no work except to take off the honey once a year, it is that original genius, Allen Latham, of Norwichtown, Conn. To say that some of his bees "work for nothing and board themselves" does not tell it. They go further—they give him big crops of honey per colony. If he worked with them, fussing with them almost every day in the summer, then perhaps his yields would not seem so remarkable.

Before we go into details about the let-alone hive, it will be necessary to know something about the man. Mr. Latham is an instructor in science in one of the high schools of Norwichtown, and naturally has a trained mind capable of seeing things from a scientific point of view as well as from a practical. While he has bees in small hives near his home that he works with, on orthodox lines, he has certain small outyards scattered out among the hills around his Connecticut home that are run on the let-alone principle.

I had always had a great curiosity to see those big hives that are run on the long-idea, single-story principle. After attending the field meet in Massachusetts last August I rode with Mr. Latham out to his home. He was "baching" it at the time, as his wife and children were away. He is not only an original genius in beekeeping but in the house as well. If his wife is away, he

## THE LET-ALONE HIVE IDEA

*A New Plan Whereby Bees Work for Nothing and Board Themselves, as Worked Out by Allen Latham*

By E. R. Root

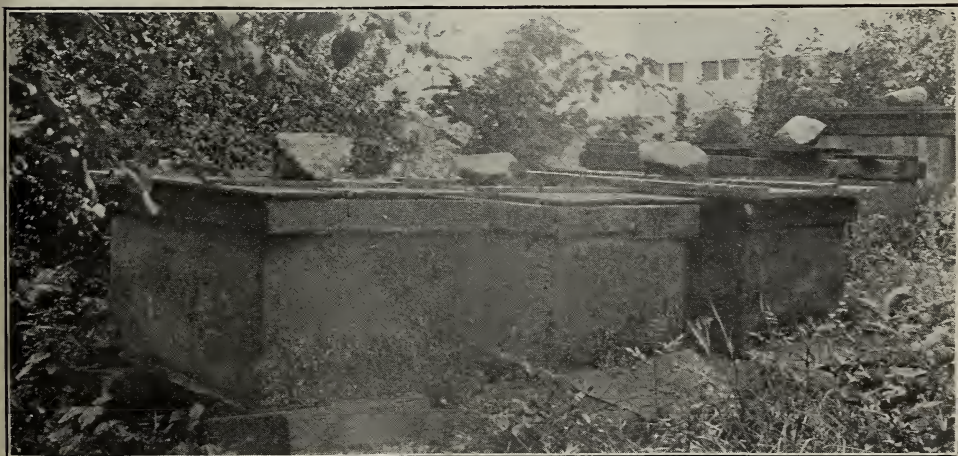
will get up a meal fit for a king. I shall never forget those flapjacks and honey, the kind that cover a dinner plate. If there ever was a time when

I wished that I had three stomachs (and then some more) it was when my host was serving those big pancakes with sumac honey.

A visit to his workshop showed me that if there was ever anything new or old in beedom that this man of science has not tried, I do not know what it is. I do not believe there is a man in all the world who has tested out more contrivances and more methods than this Norwichtown professor. He has some original ideas on shipping bees; but, if he were to tell you just how he does it, you might have to stop and scratch your head, wondering whether he be sane or "a little off." But after you let him explain, you begin to see "method in his madness." As the contrivance may be made the subject of a patent, I will not go into details.

Among other interesting things, he showed me a hive which he makes out of paper and a couple of rims on which the paper is fastened. The cost is insignificant and he knows the hive is good, because he has used it for years.

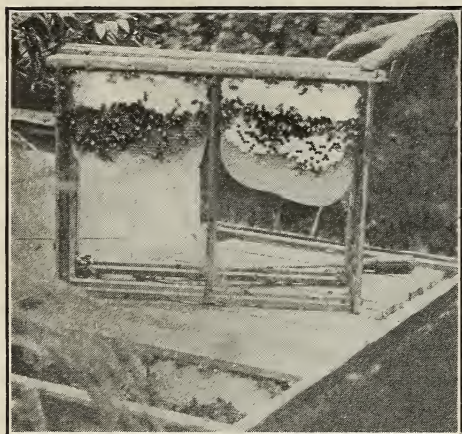
But the thing that interested me more than anything else (to get back to my subject) was that let-alone hive—a veritable barn or warehouse made out of shredded wheat-biscuit cases. It was covered on the outside with builder's-paper, and contained some 25 or 30 closed-end frames—the biggest brood frames that I have ever seen—so large, indeed, that they needed a center sup-



(1) A View in Allen Latham's Apiary, Showing the Giant Let-Along Hives Built of Light Shipping Cases Covered Over With Builders' Paper.

port. The frames, so far from being standard, are made to fit the boxes.

He puts a series of 10 or 15 of these hives on a side hill among the bushes, out of sight. Into each he puts a good swarm of bees and then leaves them for a whole year without going near them. When we called at one of the outyards shown in Fig. 1, consisting of these let-alone barns or warehouses, I ask-



(2) A Big Frame from One of Latham's Let-Along Hives, Showing the Comb Built Downward, and Producing Chunk Honey. The Frame is Made to Fit Crosswise a Shredded Wheat Shipping Box. When the Honey is Cut Out Enough is Left to Serve as a Foundation Starter.

ed Mr. Latham if that was the only visit he had paid during the year. He turned to the man standing nearby, who owned the property, and said:

"Do you remember seeing me around here before, this year?"

"No, sir," was the quick response. "All I know is that you come around about once a year—not oftener."

"Did you see any swarms?"

"No, sir, I never saw any," was the equally quick response.

We moved down to the beeyard and found it located among the bushes, almost out of sight. There may be more "method in his madness" to keep away the naughty boys, and perhaps to secure shade.

"Now, Mr. Latham," I said as I saw the great clusters of bees out in front, "don't you think you have any swarming here?"

"I don't think so," he answered. "Let us look thru the hives and see whether they have swarmed."

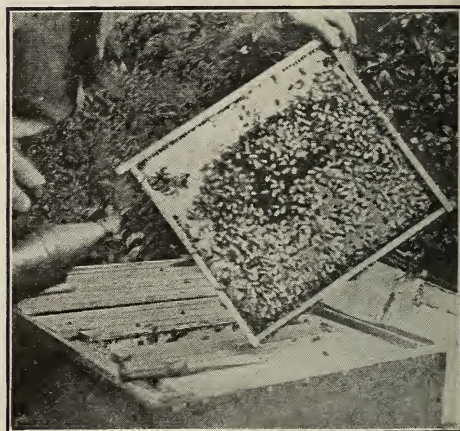
Covers were held down by means of big stones, which he lifted off and then opened up the hives. Sure enough, there were powerful colonies that had evidently begun drawing out combs at the front of the hive, and had kept working backward till they had got clear to the back side. If an ordinarily good working colony has 50,000 bees—well, I should guess those colonies had anywhere from 75,000 to 100,000. That they could

have swarmed and left such a force was impossible. No, they didn't swarm, just as the late Mr. Poppleton said they wouldn't. They had unlimited room, and kept on building more combs as these were needed. In some of the hives we found the bees had quite reached the back side in their comb building.

Mr. Latham does not take the trouble to use comb foundation for the let-alone principle. He merely takes a big knife, cuts out the comb near the top-bar, leaving a starter for the bees to fill in again. He does not bother with any comb-honey fixings nor with the honey-extractor. He simply "robs" these hives in the good old-fashioned way, minus the brimstone, and stores the product in tin buckets for which he finds ready sale. After he has robbed them as far as he dares, he shuts up the hive and leaves them for a whole year. If they die, he has not lost much; and, if they live, he will have a crop of honey. But such colonies will not die ordinarily.

Up among those Connecticut hills, Mr. Latham, like Arthur C. Miller, believes in the principle of having small apiaries and big colonies. Mr. Miller goes on a somewhat different principle. While he believes in big colonies, he uses Jumbo hives, which he can tier up.

Mr. Latham says that on his principle, and up among the sumacs, he can produce honey for about one or two cents a pound. He figures in his time in making these hives and then starting the bees to housekeeping. After



(3) Frame of Brood from One of the Big Let-Along Hives, Showing the Work of a Good Queen.

that, they must absolutely work for nothing and board themselves. They must do more—they must "divy up" with him. Feed them? No, he does not have time to do that. Besides, they don't need it with their fall flows.

Figs. 2 and 3 show some of his big frames. Fig. 2 shows how the bees build the comb downward, which he cuts out for his chunk

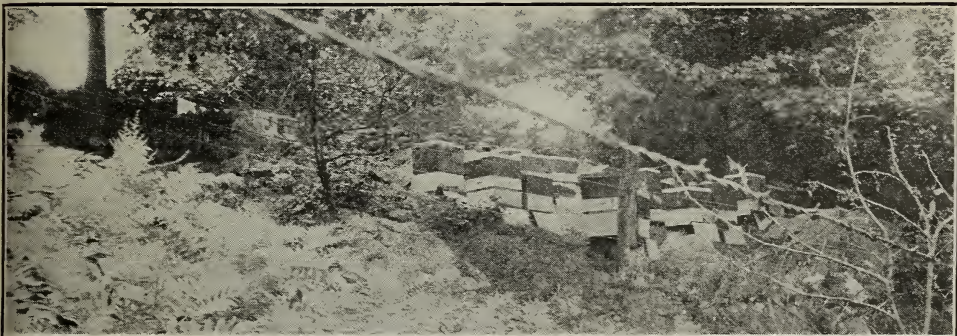
honey. Fig. 3 shows the kind of frames of brood he has, and that, of course, means good queens. Speaking of queen-rearing, Mr. Latham apparently knows every kink in the trade. To make this principle work one must have good queens—no sort of doubt about that—and Allen Latham rears his own good queens.

Our original genius does not care a fig about "orthodoxy." In fact, he rather delights in going off in unbeaten paths; and, if the other fellow does not like his way of doing, he doesn't care.

As I said, Mr. Latham has other hives that

whether Latham is "quite all there." Then, when he explains his idea, you will be able to see there is more "method in his madness." Instead of having the shelves on the inside of the building, they are on the outside. This is where he puts the mating-boxes when raising queens.

Some day I should like to have Mr. Latham tell us something about the experiments he has conducted and the conclusions arrived at. It would take a small volume. A field meet could be held at his place and beekeepers could learn something, for he certainly knows the inside and outside of



Allen Latham's "Orthodox" Apiary, Located on a Rough, Stony Connecticut Hillside.

he works on the ordinary principle of tiering up when running for comb honey. These hives are not run on the let-alone principle. His apiary, seen in Fig. 4, shows that he is following out somewhat the lines of modern orthodoxy, using ordinary hives and running for comb honey. He can be orthodox or heterodox, or any other "dox," because he has been all.

If I had the space, I should like to describe completely for you his honey-house. If you can imagine a building turned inside out, you can form some idea of what he has. You would look at it and smile, and again wonder

a hive better than most "expert" beekeepers of the country.

It is not much wonder that Allen Latham and Arthur C. Miller of Providence, R. I., are good friends. Every now and then they get together and compare notes, and are often surprised to see how nearly they see things alike. Both believe in big hives and small apiaries scattered at intervals of one or two miles apart. Both drive Ford automobiles to their bee yards, and both get barrels of fun out of the business. One is a banker and the other a teacher, but their common play is beekeeping.



OWING to advance in the greater price of extracted honey compared with the advance of comb honey, many comb-honey producers are turning to extracted. In comparing the price of comb and extracted honey, one should review the last three years. A good price for comb honey, in Colorado, was \$3.00 for a 24-section case. Extracted was bringing six to seven cents a pound. Last year (1917) comb honey brought \$4.00 a case, and extracted brought 12½ to 16 cents a pound. If

## COMB TO EXTRACTED HONEY

*Two Contrasting Views Submitted  
by Two Prominent Beekeepers from  
Two Widely Separated Sections*

comb honey had advanced in proportion with extracted, it would have brought \$6.00 to \$8.00 a case last fall.

I have been a comb-honey producer in the past, but last year I changed most of the equipment for 800 colonies for extracted equipment.

The first question the beekeeper will ask himself, when thinking of changing, will be: "What will it cost to change to extracted honey?" Now, the cost of changing is not nearly so great as many think. If the comb-honey producer has regulation or standard

hives and supers, he can change his comb honey supers to extracted bodies very easily. Take out the inside fixtures of the supers (section-holders, separators, etc.) pack them away for future reference, or better still, use for kindling wood. Then take two supers (just the outside rims) remove the tins, fasten supers on top of each other and you have a good extracted body. In fastening them together you can use cement coated nails, hive staples, or a piece of sheet iron bent around the corners and fastened with screws. I used four hive staples. Have a man, that you know will do good work, put them together, and have him plane off all unevenness so they will fit together tight. If you are intending to stay in the extracted-honey business you had better plane a little from the bottom of the super so that the extracted frames will come down just even with the bottom of the super. This will give the right bee-space between the two sets of combs.

Now you can see that a comb-honey producer will have half as many extracted-honey bodies as he has comb-honey supers. Most of the comb-honey men here in Colorado have three and four supers to the hive, so that will give them about two extracted-honey bodies to the hive, and, if they extract as often as they should, that will be a plenty.

The frames, wires and full sheets of foundation for the extracted-bodies will cost a little more than it would to fill the supers with sections and full sheets of foundation. But remember the next year you will not have this expense, as you will have all your combs for extracting.

Many comb-honey producers have some supers filled with sections and foundation that were not used last year, and they think if they change to extracted-honey production they will lose those. If they will look around, they can sell them to beekeepers that will continue to run for comb honey. Still you can better afford to burn them than use them.

Counting a pound of extracted honey worth the same as a section of comb honey, the cans will not cost as much in proportion to the value of honey shipped as comb honey shipping cases would.

The cost of the extracting outfit or machinery will vary a great deal. I know some extracted-honey producers that do all the extracting for 500 to 1,000 colonies with the two-frame extractor, run by hand, and the cost of such an outfit would be from \$50 to \$75. But some producers have several hundred dollars invested in their extracting machinery. The actual cost of our extracting outfit last year did not exceed \$50. I think a power extractor is the cheapest to buy, and will pay for itself in one season. Help that can be depended upon around the bees is hard to get; but a gas engine does not mind if a bee stings it once in a while.

I do not think the cost of changing the equipment for running 500 colonies for comb honey to extracted equipment would be

more than \$200.00, exclusive of the extracting machinery. When one takes into consideration that the expense will be for the first year only, it is very small. The next year you have all your extracting combs and machinery, so your expense will be a great deal less than if running for comb honey.

Robt. E. Foster.

Boulder, Col.

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Owing to new conditions in the marketing and relative prices of comb and extracted honey, this question will no doubt be of considerable interest at the present time. The arguments set forth at the convention held by the Jefferson and St. Lawrence County Beekeepers' Societies held at Watertown, N. Y., will hold good not only in the United States, but Canada, and will be of general interest.

Geo. B. Howe, of Black River, N. Y., opened the question by stating that the selection of comb- or extracted-honey production should in part be decided by the condition of the bees. If colonies are strong and in fine shape, they may be used to advantage for comb honey when it would be unwise to run the weaker for that purpose; and that, once engaged in the production of comb honey, there is a fascination about it that is difficult to overcome. He did not advise radical changes from the production of one to the other. He felt sure that in New York State there would be thousands of colonies starve to death during the present winter.

Charles P. Stewart, of Johnstown, N. Y., one of the efficient inspectors of that state, thought that one should be slow in making radical changes, saying that the man who is equipped for either had better stay by what he is engaged in. If beekeepers make a rush in the direction of producing one kind of honey, the price of that article will likely be depressed and the other enhanced.

D. R. Hardy, of Burrs' Mills, N. Y., who has tried (and usually with success) quite a variety of things, including beekeeping, berry growing, photography and politics, stated that beekeepers should get ready for the coming season now. He strongly emphasized the fact that procrastination is the thief of time and that this is particularly true of beekeeping.

The consensus of opinion at this convention was that it is not advisable under present conditions to rush into extracted-honey production. It is not an easy matter to face the season running for extracted honey without drawn combs; in fact, the bees could produce almost as much comb honey in sections as they could extracted honey if they had to draw out foundation. Again, the swarming impulse would be much greater when the bees had to draw out sheets of comb foundation in the supers instead of having combs. And again, if many beekeepers were to change from comb- to extracted-honey production, a good present market for comb honey might be lost. Several

strongly advised that whatever changes were made should be moderate.

Brantford, Ont. R. F. Holtermann.

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[The two parties hold quite opposite views on this vital question. With the former we are in hearty accord; with the New York beekeepers whom Mr. Holtermann quotes, we most emphatically disagree.

When our government bulletins are advising us to stop raising comb honey and expend all our energies in producing extracted, since more of it can be produced, it is not a time to attempt adding a few extra pennies (even if we could) to our coffers, especially when doing so necessitates our snatching the much-needed sweets from a sugar-starved world.

It is claimed that "bees could produce almost as much comb honey in sections as they could extracted honey, if they had to draw out the foundation." Our experience has proven that bees have a decided preference for the large frames over the little square section boxes, and therefore produce much more honey when using the former. In this same connection we note the further contention that "it is not an easy matter to face the season running for extracted honey without drawn comb." Now it just happens that we have some exact data along this very line which seems to show rather conclusively that the difference is not as great as generally believed.

In 1916, we started a small apiary of 33 colonies. All but one of these were supplied with one shallow super of drawn combs and six or seven combs in the brood chamber. The rest of the frames in the brood chamber and the remaining supers were all filled with foundation. This apiary increased about 57½ per cent (the new colonies being given no comb whatever) and made an average of 106 lbs. of honey per colony. In our other apiaries in that same locality we had 190 colonies which increased 41 per cent and averaged 118 lbs. Last year we bought another small apiary of 35 colonies, and, with the exception of one shallow super of combs per colony, they were given foundation entirely and, as usual, no extracting done until the end of the season. This apiary produced no increase, and, it being a poor season, only averaged 48 lbs. per colony. The 265 colonies of the other apiaries of this group also produced no increase and made an average of 44 lbs. of honey per colony.

Further it is claimed that "the swarming impulse would be much greater when the bees had to draw out sheets of comb foundation in the supers instead of having combs." We would expect to find something in this. But for 1916, which was an especially bad year for swarming, and 1917, which was an unusually good one in this one respect, does our record bear out this statement in a very striking manner? But, really, this last quotation hardly deserves to be answered, anyway, for is it not really begging the question?

In changing from comb to extracted, there could arise no question as to whether colonies with frames of foundation would be more apt to swarm than those with combs. The question would be whether colonies with full sheets of foundation would be more apt to swarm than those with sections of foundation? If there is any difference, we are inclined to think it is all in favor of the full sheets.

The New York men's last point is that "if many beekeepers were to change from comb to extracted honey production, a good market for comb honey might be lost." Good! That is just what we want during the duration of the war. That is exactly what the government is working for (now by request, later perhaps by enforced demand). Also this is what every red-blooded American beekeeper ought to be working for.

We are glad to call attention to what Mr. Holtermann himself has heretofore said as to making money the deciding factor in honey production in these days of food scarcity. It will be remembered that he sold his 1917 crop at only ¼ cent advance in price over the crop of 1916, because as he said: "I was utterly disgusted with the grab and greed of the present day," and "I, for one, should I be living that long, want to be able, when the crash comes, to look every one in the face and say, 'I had no part in it.'"

When we recall the many millions of dead over in Europe, especially of old people and children who have starved because of the shortage of food supplies, are there any arguments strong enough to persuade us to raise less food? If so, what would be that all-convincing argument? Money? No, not when beekeepers see the matter in its proper light, or even if they look at it in the light of money only. For, considering the present price of comb and of extracted honey and remembering certain facts given on this page, it will not be difficult to prove that changing to extracted honey will be a good financial venture.

But, as before stated, this will not be the determining factor. The motive that is going to arouse the beekeepers of the land to this desired step may be expressed in one word—patriotism.—Editor]

#### Another Convert to Extracted.

"I think the comb honey business will have to go. It doesn't pay to monkey with comb honey when the price is about the same as extracted honey. There is only one—the best grade—for all of it; no culls; no bother to keep hives level; not one-tenth the bother to keep bees from swarming; no hurry to sell it before it candies; no danger of the bee moth spoiling it; no trouble to have the bees cap it white; and some clean cash to get from the wax of the cappings. There are all these advantages and more, in producing extracted honey over comb-honey production. So comb honey will be a thing of the past for me at least."

Brush, Col.

Daniel Danielson.

## FROM THE FIELD OF EXPERIENCE

### AN ASCENDING HIVE

#### A New Idea in Hive Building and Why One Man Likes It

This "ascending" hive was designed to eliminate the lifting necessary in the use of tiered-up hives, which is trying on all beekeepers and especially so to those of advancing years; also to overcome the objection to the long-idea hive that the bees do not store as much honey in a horizontal hive as they do above. I have experimented enough to prove this.

I had two hives of this ascending pattern made last spring. The two cost \$7.40 complete, painted and crated for shipment.

The last week in May I placed an average colony in each, confined to nine frames. One of the colonies started cells and the other did not, and the yield was as good as any colony in my yard. (Very poor season—35 lbs. average for 112 colonies.)

My ascending hive holds 21 frames, spaced  $1\frac{1}{2}$  inches, and stepped  $\frac{7}{8}$  in. All makes of frames of Langstroth dimensions can be used, and perfectly spaced by simply pressing them against the steps. It is a pleasure to handle the frames in this hive and it is a great labor-saver.

After the extracting was done I divided each hive with a close-fitting division board, equalized the brood and honey, and gave the queenless part a cell.

This hive will be almost as easy to move as a two-story hive, if the legs are removed and the bodies nested.

It suits me better than any I have yet tried, and I have experimented with Hand bottom boards, Danzenbaker, Langstroth 8- and 10-frame and "horizontal" from 16 to 32 frames. There may be some principle that will condemn it, and I know there is no one better than Gleanings to tell me of it.

Los Angeles, Cal.

Eugene Baker.

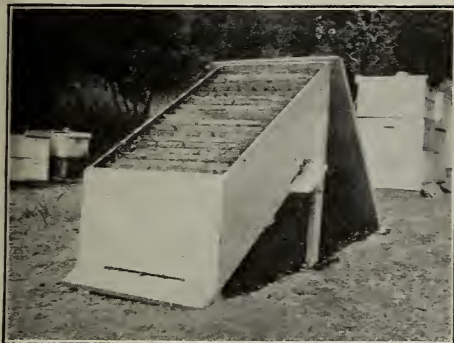
[We have made some tests of the long idea hive, and do not find there is any difference about bees storing horizontally or on a vertical plan, like a sky-scraper, for example. Your experience is somewhat unusual, if you found that bees would not store in a horizontal hive of the "long-idea" principle, as well as in a vertical hive, one story on top of another. The greatest objection we would have to the one that you show is that the rabbet to hold the frames must be in the form of a zigzag, or steps. This would defeat one very important feature of a modern movable frame hive, for in your hive the frames could not be shoved together nor pulled along as a whole. It is very important that the frames be so arranged in the hive that they can be shoved together in lots of three or four. If we understand the principle of your hive, it would be impossible for you to do this without manipulating each individual frame. This would take considera-



View of Eugene Baker's Apiaries, Showing the Standard Ten-Frame Tiering-Up Hive, the Long-Idea Hive and Several of the Ascending Hives.

## FROM THE FIELD OF EXPERIENCE

ble amount of time. While the heat has a tendency to rise, the form of hive that you show in the photograph would have the same objection that a vertical hive would have. The lower end of the hive would be cooler than the upper end. The very feature that



An Ascending Hive with the Cover Removed, Showing Frames.

is good in the horizontal or long-idea hive, is that the temperature is the same practically all the way thru it, one end or the other, and the very fact that the hive is large enough to take 10, 12, 15 or 25 frames, makes it unnecessary to have extra supers or do any lifting—Editor.]



### POUND PACKAGE EXPERIENCE

Water in Transit Should Certainly be Provided by the Shipper

During the past season I had the privilege of receiving for the Superior Honey Co. of Ogden, Utah, over 1,100 pound packages of bees, shipped to Utah from Texas and other Southern states. This was an interesting experience to me during which I believe I learned a few things that might be helpful to those engaged in the combless-package business another year.

These packages were all shipped when the weather was quite warm, and some when it was very hot. The first shipment was received during the first days of June, and the last about the middle of July. They came from nine different sources and in various styles of cages and methods of shipping. The greatest variance was in the methods of supplying feed. I also had the chance to observe the difference in bees supplied with water in transit and those that were not, that is, bees that were fed candy alone, and those that were fed candy and water; bees shipped with syrup cans instead of queen candy; also bees shipped with pieces of comb-honey for feed. I received bees in small

cages and large cages, and with the exception of 18 two-pound packages they were all one-pound packages.

The fact that over 50 per cent of these bees, taking an average of the whole, were dead when they arrived here (some shipments being all dead) indicates that the venture was far from satisfactory at either end of the transaction.

The cage in which the most successful shipment was made had the water bottle. A fortunate thing happened in this shipment that to me proved this conclusion: Water is necessary for successful, long-distance shipments during warm or hot weather. In this particular shipment the cages were crated in lots of three, having a cloth strap handle tacked on each lot to carry them by. By a mistake the shipper tacked the handle on the wrong side of two of these lots so that the express handlers carried them upside down all the way, the bees not being able to get any of the water. The six packages in these two lots were the only dead ones in this shipment of 90. Those bees that could get the water were in fine condition. Another thing that strengthens my conclusion is that this same shipper had previously sent three shipments without water and they nearly all arrived dead. Another later shipment with water arrived in fairly good condition. The cage illustrated and used by this shipper measures 9x14x4 inches, being a large cage for one pound of bees.

The next best results were obtained where the syrup can was used, but out of several that I received that way none quite came up to the one mentioned above where the water bottle was used. One shipper who sent 105 packages in four shipments by the syrup-can method had a loss of 22 per cent. I received several shipments in which only candy was used. In these the bees were all dead on arrival.

I know nothing of the conditions that the bees had to pass thru enroute, but I think that the express men should be educated to take better care of them. Instead of putting them in a far corner of the car and piling baggage in front of them, the expressmen should be taught to sprinkle them occasionally and keep them where they could get air in hot weather.

Most of the shipments to me were about five days on the road; a few were seven. A number of them went by way of Kansas, and it is possible that they experienced some hot waves on the route. In no case, as I remember, did they consume all their food, and some of the shippers put in much more than was necessary. If they had all been supplied with water I think we would have had a much better story to tell.

In introducing pound packages I tried every method I could find recommended in

## FROM THE FIELD OF EXPERIENCE

Gleanings and elsewhere. The one I prefer is to confine them in the hive with a piece of excluder over the entrance. I take out enough frames so I can set the cage right in the hive, and before opening and placing it in I sprinkle the bees with thin syrup or even with just plain water. This holds them in while I make an opening in the cage to release them and get the cover on the hive. If the queens come caged I release them also at this time.

Garland, Utah.      Joseph H. Peterson.

[This is a very important question. To a certain extent the whole industry for the coming season hangs upon the successful shipment of bees in package form. There is nothing more discouraging or more exasperating than to have half or all of the bees arrive dead. This causes more or less controversy between shipper and consignee and by the time that a second shipment is sent thru it is too late. The writer was the one who first suggested the use of the water-bottle in pound cages; but in view of the fact that some very successful shipments were made by Southern beekeepers without the water-bottle, we had almost come to the conclusion that it was an unnecessary expense. But the experience of a number of breeders of bees has seemed to indicate that on long-distance shipments, especially in hot weather, the water-bottle is a necessary and an important factor. The evidence presented by our correspondent is invaluable and we hope that bee breeders of the South will read this article very carefully. The makers of pound cages should so construct them that the water-bottle may or may not be used.—Editor.]

### COSTLY EXPERIENCE

**Sow Sweet Clover Right Where You Are—Lots of It and Keep at It**

Sweet clover will eventually revolutionize the whole bee-business. There are millions of acres of land in this country that will grow sweet clover and that are absolutely fit for nothing else. Why do not the beekeepers utilize some of this land?

There are many beekeepers living close to towns where there are hundreds of acres of waste lands in town lots that could be used for sweet clover. There are thousands of beekeepers that live in sections where there is old, poor, worn-out land that the owners would be glad to have sown in sweet clover. Why not sow it now? I get letters from the seven corners of the United States wanting to know of the honey prospects in this section—letters from parties that are willing to put up several hundred dollars to try out a new country. I want to give to all of

these inquirers this advice: Instead of putting this money in the coffers of the railroad companies, put it in sweet clover seed, and build up your own location.

I had a call recently from two Michigan beekeepers, looking for new fields. Their own locality yielded more honey than mine. Now add sweet clover to their location and you have a bonanza. I also had a call from a dentist beekeeper. His dental trade paid \$3,000 a year. He wanted to keep 200 colonies of bees. His old location gave 40 pounds per colony. Now add sweet clover and he will have a location that will give 100 pounds per colony.

Thousands of beekeepers try to increase their yield of honey by adding some fool contraption to the new, modern, up-to-date fixtures now on the market. Let these invest their time and spare cash in sweet clover seed. Any white clover location can be doubled in value from a beekeeper's view point, by adding sweet clover.

I moved to this country four years ago. I left a good, average white clover country. I now have a sweet clover location with no white clover to speak of, which yields 75 pounds per colony. Now if I could have my old white clover, too, I would have a location that would give 125 pounds per colony. This is impossible to obtain here, so I now see my mistake. The money I put in moving 30 miles to my present home, if it had been put in sweet clover seed and sowed on my old location, would have given me a location 40 per cent better than my present one. In my old locality farmers are sowing sweet clover by the thousands of pounds. Only yesterday I had an inquiry from one of the most progressive farmers in the county, for enough sweet clover seed to sow 150 acres, on land worth \$200 per acre. (There is a moving bee beginning to buzz in my bonnet again.)

When I say "sow sweet clover to make honey," I mean sow the railroad right-of-way; sow the highways; sow the byways; sow the vacant lots; sow the farmers' fertile fields; sow the barren spots; sow the cliffs. Sow 10 pounds of yellow and 10 pounds of white for each colony. Sow one-half of it this spring; then do it again next year. Dig down in your jeans; shell out your greenbacks. A hundred pounds is money wasted.—sow it by the thousands. Make your business stand alone; make your business give you a commercial rating; get out of the rut; do not let the Editor of Gleanings make you believe that sweet clover is a slow yielder of honey. He never saw a sweet clover location. Get 200 acres in reach of your hundred colonies; get conditions right; watch 8, 10 and 12 pounds, day after day, go into your supers; then get busy.

I have no seed for sale. I am not inter-

# FROM THE FIELD OF EXPERIENCE

ested in any one that has. I simply write this article for the benefit of the wide-awake beekeepers; for the men who think; for those who are willing to take the advice of one who has spent hundreds of dollars of his hard-earned "dough" looking for new locations.

Falmouth, Ky.

Virgil Weaver.

## CONVERSATIONS with DOOLITTLE

He Answers a Question About the Egg-laying Capacity of Queens

"A neighbor gave me some old bee papers he had, and in one of them I find something about the capacity of queen bees for laying eggs, the claim being made that a good queen could lay as many as 3,000 eggs in 24 hours. This hardly seems possible. Will you tell us something about this in *Gleanings in Bee Culture*?"

The prolificness of queens was something much discussed in our bee papers a quarter of a century ago, the claim being then made that the more eggs a queen could lay the better the results would be in honey, and quite a few reasoned that the queen and colony which would keep strong at all times of year was the ideal queen to breed from. This led to difference of opinion between those producing section or comb honey, and those producing extracted honey. The latter held to the idea that queens should lay a large amount of eggs at all times. The former were strong in their belief that only as the queens reached their maximum prolificness about six weeks before the main honey harvest for surplus, could this prolificness count for the highest success. By going over an old diary, I find that prior to 1874 I had thought that nine Gallup frames, containing a comb space of about 1,000 square inches, would entertain the best queen to her fullest capacity, no matter whether the colony was worked for extracted or comb honey. At about that time a prominent beekeeper by the name of Adair brought out what was called the "long-idea" hive. I made two of them, working one of them for extracted honey and the other for comb, these hives being made to hold 32 Gallup frames instead of the nine I had been using up to that time. I selected two average colonies, and when the nine frames were well covered with bees, and there was brood in seven or eight of the combs, I set each over into these four-foot hives. At the same time I selected two other colonies of about the same strength, one to be worked for extracted honey on the tiering-up plan, and the other on the plan I had before been using for comb honey. In due time the two long hives were filled out with the full 32 combs, with sections on the one for comb honey, and

extracting going on every week to 10 days with the other, as was the custom at that time. With the tiered-up hive, the queen was kept on the nine frames by means of a slatted honey-board, and the one for comb honey manipulated as well as Doolittle knew how. Before the basswood harvest arrived the extracted-worked colony had brood in every one of the 32 combs, the amount of about 18 to 20 combs full of brood; while the one worked for comb honey, having 32 combs, had brood in only 13 combs, the amount in these being little more than what nine frames would have contained. Thus the queen in the extracted-honey hive was laying about 5,000 eggs each 24 hours, and the one in the comb-honey hive was giving only about 2,500, each queen evidently laying to her fullest capacity.

After considerable study and experimenting along several lines, I was driven to the conclusion that the cause of this difference was that where extracting was done as often as once a week plenty of cell room for brood was given; and that, under the stimulus of the bees cleaning up their combs, the queen was fed by the bees to an extent that caused her to double her usual egg-laying powers that were natural and as nature demanded when the colony was in a hollow tree or some cleft in the rocks. Thus, thru management, I had brought about the doubling in development of the embryo eggs she had in her ovaries. These four queens used in the experiment were less than a year old, but the one in the long extracted-honey hive died of old age that fall, while the other three lived and did good work the next season. This long hive worked for extracted honey gave 566 lbs. surplus, while the one worked on the tiering-up plan gave 359, thus showing 207 more pounds of honey for double the brood reared. The long hive worked for comb honey gave 51 lbs. of section honey, with the 32 combs almost solidly full of honey, while the one worked by my old plan gave 309 lbs. of section honey, with enough below to winter the colony.

A good queen can lay from 2,000 to 3,000 eggs in 24 hours in the swarming season; but the question arises with many, can a greater amount than this be produced at a profit? If it were the EGGS in themselves which gave the financial profit, as with our poultry, then the queen which gave the most would be the one we all should want; but there are many times that the prolificness of the queen causes a large amount of honey to be used in rearing the brood from her eggs, which produce only bees that become consumers instead of producers, on account of this vast horde coming at the end of any certain honey flow, instead of at its beginning.

Borodino, N. Y.

G. M. Doolittle.

E. M. B. writes that I said in September, 1916, *Gleanings*, page 777, that for 20 years to stop swarming, I had raised brood above sections, using a ventilated bee-escape board on top of the sections; and he wants to know if I put up only sealed brood. That's a modification of the Demaree plan, and if you will look again, friend B., you will see that I don't say I used the plan but quote from M. H. Hunt. Very likely Mr. Hunt put up brood in all stages. I never used the plan except in a few cases, and they were not a success because the bees carried down bits of dark comb from the brood above to darken the cappings of the sections.

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A. I. Root, you're infringing on my patent is using a wheel-hoe for a wheelbarrow, p. 957. With one having a high wheel, such as you and I use, the load is jarred much less than on a wheelbarrow, and I'm wondering whether it is not much better for wheeling a hive of bees.

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"Ever have your temper tried by a swarm that would persist in settling back on a limb as fast as you shook it off, said limb being too high up to be reached by a smoker? Floyd Markham says to take a piece of rain-conductor spout long enough to reach, and blow smoke into the lower end."—Domestic Beekeeper, 40.

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C. V. Rice, you say, page 104: "I really thought that I was fortunate in having so much drawn comb in sections for next season." You are, in spite of the fact that they will not make as nice sections as fresh foundation. The promptness of the bees in entering supers containing such sections, together with the greater amount of honey stored, overbalances the lower price at which they must be sold.

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"When Introducing, Why Not Daub Bees Alone and Not the Queen?" is the caption and substance of an item from G. G. Desmond, page 104. I shouldn't want to try that on a large scale. You can't very well daub all the bees, and there's little to hinder the undaubed ones from being hostile. Many years ago introducing by daubing the queen was perhaps the most popular plan, and succeeded in thousands of cases—without hurting the queen, too. Giving the teacup of honey with the daubed queen is simply an added measure of safety to the old plan, and surely should help.

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Frank Morgan says, page 104: "On page 941 Dr. C. C. Miller seems to think the claim that colonies run for extracted honey will

## STRAY STRAWS

Dr. C. C. Miller

produce 50 to 100 per cent more honey than when run for comb, isn't anything more than loose guessing . . .

At any rate . . . we have proved

. . . to our satisfac-

tion that this is a fact." My good friend, you seem to have missed the point I was making. I said in effect that the different claims for increase of extracted over comb honey ran all the way from nothing up to 100 per cent. I wanted to know, in this wide variation of opinion, where the truth lay, and some proof for it. Like enough you are right, but isn't your own statement, "50 to 100 per cent," rather "loose"? Now if you will tell us a definite per cent, 50, 75 or some other, and how you proved it, and if others will do the same, it will help a lot.

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A Pennsylvania correspondent asks how, with a German wax-press, he can at one operation extract yellow beeswax out of old dark combs without remelting. I don't know of any way. You can have a fairly good product, altho a little dark, if you will let it be a long time cooling, covering up well to keep it warm, or putting it in a fireless cooker. It may be made lighter in color by using sulphuric acid, but the danger of injuring it by this means is so great that the foundation-makers to whom you send it prefer that you should send it without such treatment. Everything in beekeeping seems to tend toward specializing. Time was when beekeepers made their own hives and foundation, but hardly any one thinks of doing that now, and I find it easier and cheaper to send my old combs to those who make a business of melting them.

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"The temperature should be somewhere about 40 or 45 degrees" when we want bees to breed in the cellar, page 101. You succeeded at that temperature at Medina, but do you know you would not have succeeded as well at a higher temperature—or lower? You know that for years we thought 40 or 45 was the best temperature for cellar-wintering, but Dr. Phillips has taught us better. On the other hand you know that bees outdoors begin breeding earlier than those in the cellar, just because of the severe cold. I wonder if we know very much definitely about it. However, except as a matter of curiosity, I don't suppose it matters, for you are no doubt right that it's not likely to be a profitable plan to adopt. [For breeding in the cellar we would prefer to have a temperature higher than 45 rather than lower than 40. It could go even as high as 55 and perhaps 60, providing there was plenty of ventilation, and we are not sure but that at the last named temperature the conditions would be more favorable for breeding. The danger would be, however,

that such a temperature would be too much of a good thing.—Editor.]

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Melting old combs and scraps has been quite generally considered a job to be put off till the leisure time of winter. Oscar Ritland says, February, page 83: "I prefer the summer time to do the work; and the hotter the day the better." Aside from the matter of leisure, probably everything is on the side of hot weather. As the whole business depends on getting up a certain amount of heat, the hotter the weather the less artificial heat required. One rather important item is that the hotter the weather the longer you can keep your mass of wax cooling, and the better chance to let it clear. [The advantage of doing the melting during the winter time is that the beekeeper has more time at his disposal; moreover, there is no chance of robbing, which might be dangerous if foul brood were in the combs before they were rendered.—Editor.]

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Stancy Puerden, please don't stop talking about cornmeal just yet. I was deeply interested in your talk in November Gleanings. Cornmeal is practically taboo at our house, and I think largely thruout this region. I suspect our women folk don't know how to handle it. When I was a boy in Western Pennsylvania, "mush and milk" was a staple article, and a pone baked in a Dutch oven under the ashes was not to be despised. And when you talk about a thin cake, "crisp and crusty," yum! yum! it makes my mouth water. One objection to using cornmeal is the high price of eggs; and when I read aloud "hoe-cakes contain nothing but meal, salt, and water," there is a surprised echo, "Nothing but meal, salt, and water!" which sounds the least bit like saying, "What does that woman know about decent victuals. anyway?" But if you keep right on I've a faint hope that some day my folks may achieve a hoe-cake.

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Geo. L. Emerson, February, page 76, says: "Roughly speaking, there are some 200,000,000 pounds of honey . . . an average of about \$20,000,000 worth of honey per year in the United States." That's figuring on about 10 cents a pound as the average price. Then in a footnote he says: "The prices considered in this article are not war prices but based on normal conditions." That sounds as if he had in mind that just now we have war prices, and when the war is over prices will settle back to where they were before the war. Don't think it, George. In more than one way honey is now having such a boost as it never had before. Much is being said—outside of bee journals—about the special value of honey, and in all sorts of periodicals you will find 20 times, if not 50 times, as much in the way of recipes for the use of honey as you found before the war. The effect of this will not pass away with the passing of the war. When the war closes there will be a general settling

of prices, and no doubt the price of honey will come down; but never to the old level. Don't you see? if there had been no war, and honey had had the same boosting it is now having, there could not have failed to be an increased demand and corresponding stimulation of prices? Well, that's just what we're going to have, and there are bright prospects ahead for beekeeping. [It is our opinion that honey will not go down to its former level even after the war is over, and conditions normal. The vast amount of free publicity recently given to honey will keep the price up.—Editor.]

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It appears we're not getting along very rapidly at educating the public to use the term "extracted honey" when even the dealers call it "strained honey," as you will see by looking at Buffalo quotations in "Honey Markets," January, p. 4. I've heard even beekeepers say "extract honey," suggesting extract of honey; and in the popular magazines, whenever a recipe calls for honey it's almost invariably "strained honey." Can't some one think of a better term than "extracted"? "Liquid honey" would be just the thing if honey would stay liquid, and possibly it might do in spite of the candying. "Combless" or "waxless" might be better than "extracted" if "extracted" were not already in use. Should we keep right on trying to have "extracted" something more than a beekeepers' term, or shall we use something else?

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A New Zealand correspondent is somewhat disturbed lest we be working against God's will when we try to prevent swarming, or select the best queen to breed from instead of allowing the bees to have their own way and rear queens from all grades. Quite likely natural swarming is the best thing when bees are left to themselves, and the same thing applies to queen-rearing, and I would not for a minute think of interfering with the natural habits of bees if I didn't think God wants me to; but I have a very distinct belief that he does want me to do my level best to control bees and to do all I can to make them produce all the honey they will to help in supplying sweets for ourselves and allies, so as to give us strength to set the Kaiser down where he belongs, even if we have to set him down so hard as to make his teeth rattle. My warrant for interfering with the natural habits of the bees, I get from Genesis 1:27, 28, where we are told that God made man, male and female, "and God said unto them, Be fruitful and multiply . . . and have dominion . . . over every living thing that moveth upon the earth." I take that as a direct command to control the bees; for what sort of "dominion" would it be if I left them to do as they please? So when I try to control swarming, and breed from the best, I believe I am trying to do according to the mind of God.

D R. MILLER asks, page 89, if there is any good reason why one should keep a hive queenless for 30 days instead of 10 in the treatment of

European foul brood. I should say there was, sometimes. All European foul brood is not alike. While inspecting I find a great difference in the character of European foul brood. In some hives the larvæ appear to die young and are easily removed from the cells, while in other hives the larvæ die in all stages of growth, from two or three days old to those that have their growth and are even sealed over, and when examined have much the same appearance as American foul brood, being changed into a sticky, stringy substance, that bees can not readily remove from the cells. Indeed (I hate to confess it) I have been deceived again and again into thinking it was American foul brood. Now it stands to reason that when conditions are such as I have described it will require much more time than when the dead larvæ are small and easily removed and three weeks or even four is not too long a time for the colony to clean up, unless it is very strong and particularly enterprising.

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Stancy Puerden informs us, page 91, that honey contains vitamins, an important fact, and may be one reason why honey is more desirable than sugar for the rearing of brood.

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The United States Food Administration advises against the use of sugar for frosting cake. Somewhere in my travels I have found granulated honey used for this purpose, and it was entirely satisfactory.

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Those beekeepers who are not too old to learn can get more than the value of a year's subscription for Gleanings from the article by H. H. Root on the art of rendering beeswax. I received some points of considerable value.

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There are several good things that will, I believe, come out of this awful war. One of the least, perhaps, but one in which all beekeepers are interested, is that honey will be more extensively used and appreciated than ever before.

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I was interested in Mr. Coverdale's article on sweet clover, page 845. One great difficulty about introducing it around here is in getting a good stand of it. Is it because of a lack of lime or bacteria in the soil? It seems to grow well along the roadsides. Would he recommend the use of scarified seed when the seed is sown in the fall?

## SIFTINGS

J. E. Crane

C. V. Rice, on page 104, quotes Floyd Markham as saying "No one can produce fancy honey nor even No. 1 in sections that have drawn combs in them

from the season before," and asks the consensus of opinion in regard to drawn comb in sections. Let me say that I think Mr. Markham's assertion quite too strong. We have in such sections produced honey that I doubt very much if Mr. Markham could tell from that built on new foundation. I certainly could not if they had not been marked with a pencil. I will grant that old drawn comb will not, as a rule, result in as nice looking sections since the wood is likely to be somewhat stained. To secure best results it is necessary to clean thoroly and cut down the old comb to within about  $\frac{3}{8}$  inch of the center or septum. We use a special knife for this purpose and like it much better than B. Taylor's method of melting. We shall use several thousand such sections of old comb this year.

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I and my helpers undertook the job of salvaging nearly a hundred cases of comb honey for a large city dealer. It had been shipped from several producers, and was badly broken. It was then re-shipped to me to prepare for market. This was a sticky, mussy job if ever there was one, but I shall get out of the mess some 30 cases of unbroken sections, a thousand pounds of liquid honey, 40 or 50 pounds of wax, and not a little information as to how some people pack their honey for market. One producer had marked everything "not less than 11 oz."; another "not less than 12 oz."; while another had risked his reputation in marking "not less than 14 oz." Some sections were not marked at all. Some cases contained both white and dark honey. Some sections labeled "white clover" contained buckwheat honey. Some had been put on the hives without separators and were badly bulged, while others had been used with too narrow separators and the comb built out beyond them, making it too thick for the carton, so the ingenious producer had shaved it off. There were some unfinished sections packed in with those that were finished and all supposed to be No. 1 honey. Some combs were old and dark but all went into the same grade. Indeed, there was no attempt to grade it. As I worked away at it for two or three days, "I looked on and received instruction" as the wise man remarked a long time ago.

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The severe cold of late December and January may cause the loss of many colonies of bees in New England.

## OUR FOOD PAGE

Stancy Puerden



Do you know? I would rather be given a hoe and a trowel and my time for a whole lovely morning in the garden than almost anything else you could name in the way of a good time. A hoe is one of my favorite tools, especially a certain light one with a scalloped edge. Don't repeat this at an art club, but I have always disliked Millet's picture of "The Man With a Hoe," and so, last summer, with the help of a good borrowed camera, I made my own picture. Don't you think it is more cheerful than Millet's? I always resent any implication that the man who works the soil should be an ignorant, downtrodden, stupid animal. He should be full of the joy of living, working in harmony with God and Nature.

No one ever tasted food in perfection who did not produce it himself. The boy in the picture, with the help of his older brother, planted that corn, hoed it and tended it and watched over it. They had never raised field corn until last year, and they were so proud of it when it gave promise of being taller than any other in this vicinity. But one day a severe wind storm laid that stately corn flat on the ground, and there were two sober boys in our home. When the storm finally abated and before the sun had dried off the mud, the boys went out and began work. They tenderly but firmly raised each fallen stalk and held it upright while they packed the damp earth around it. One grandfather told them to leave it to nature and the brace roots, and the other grandfather thought they were injuring it. But they persisted and within 24 hours with muddy clothing but beaming faces, they had their corn proudly erect again. And unless you have gone thru such experiences yourself you cannot imagine how good cornmeal dishes taste made from that corn ground in our own little mill. The boy in the picture furnishes the motive power for the mill,

work which no doubt also enhances the flavor of the cornmeal.

Cornmeal is not the only way we have preserved the sunshine of our garden for winter. Every

time I open a can of vegetables, canned fresh from our garden, every Puerden looks cheery, and we assure each other that we are going to work harder than ever in our war garden this coming summer. As for dried sweet corn, all three of our children have assured me individually and collectively and earnestly that I have never yet cooked enough at one time.

Have you noticed that every advertisement by a seedsman is urging you to get in your order early? That is sensible advice at any time, but this year it is very important. Get your seeds and make your garden plans early and help feed a hungry world. And you will have many happy hours working

"Among the lowing of the herds,  
The rustling of the trees.  
Among the singing of the birds,  
The humming of the bees,"

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Pew'erden, Power'den, Pewaterden', or Puer'den?

Dr. Miller, in the February issue, is uncertain how to pronounce the name Puerden. Call me just what you like, Dr. Miller, and

so may any subscriber of Gleanings. You are quite welcome to say Stancy if you find it easier. I am going to confide in you that at the end of the year I thought it would be fitting to step out of Our Food Page and give someone else a chance. When I notified the editors they promptly went down on metaphorical knees. One made threats and another held out all sorts of inducements. He even went so far as to say I might write about anything I pleased, gardens, for instance. Now I happen to know that editors are nice to contributors for only one reason: they want to please the subscribers. And because Gleanings subscribers have said



kind things about Our Food Page the haughty editors are nice to Stancy. But if I keep on with the work it is not to please the editorial staff. It is because I so much appreciate the kind letters which come to me. It is an inspiration to think I am gaining friends in many different sections of our country, and even in foreign countries. Let me assure every subscriber that Our Food Page is at his service in every way possible.

Oh, yes, I nearly forgot to tell you how to pronounce Puerden. Most people in our town call it Pure'den. People here are too busy for three syllables, and, not being famous, we do not try to accent the last syllable. You know grand opera stars have been known to change the accent of a name to the last syllable on becoming celebrated.

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### The New Ruling as to Wheat Substitutes.

Are any of you concerned about the ruling that we must buy a certain per cent of wheat substitute every time we buy wheat flour? I don't know what the proportion will be by the time this reaches you, but even if it should be fifty-fifty it is not going to be so difficult. Many of us have been using a very large percentage of wheat substitutes for some time, and the new rule will tend to equalize the burden. It has been hardly fair to those of us who are patriotic and loyal and substitute cornmeal, oatmeal, rye, rice, potatoes, barley, buckwheat, etc., for a large part of the wheat when there are people, ignorant or wilfully disloyal, who have been using meat three times a day, white flour exclusively and wasting food. To illustrate, let me tell you a little story of a colored washerwoman. She said she and her husband used meat three times a day, but she finally became convinced that they ought to practice conservation at least once a week, and so they are using only dried beef and crackers for supper Saturday night. She is too ignorant to realize that those are the very foods needed to be shipped abroad—meat, wheat and fat. Evidently she does not fancy conservation desserts, for when she goes out to work she supplements her dinner by pie brought from home, and throws part of the crust in the garbage pail.

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### A Honey Story.

Now I am going to stop talking conversation for a few minutes to tell you a true honey story. One morning a certain mother of four children was in the kitchen frying gridle cakes, while her husband and the children were eating them in the dining room. The father poked his head into the smoke-laden air of the kitchen and said, "Do we get any honey this morning?" "Why, no," said the mother, "I thought we could get along one morning without honey." "Then you come in here and settle these children," said the father firmly, "and I will take your place in the kitchen." I imagine the father in this story will add bookkeeping to his accomplishments next summer.

Before leaving the subject of honey, let me urge all of you to read two articles by Alfred McCann. One is on sugar and is in the February number of Physical Culture, and the other is on honey and is to appear in the March issue of the same magazine. He puts the case for honey more strongly than I would dare. If dietitians keep on saying such fine things about honey, may be we shall live to see the day when honey is our best known sweet, as it was in antiquity.

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Before giving recipes, may I say a few words more about the home grinding of wheat and other cereals? You know many of our foremost authorities on foods have much to say about the present methods of milling which deprive us of some of the most valuable constituents of the grains, the soluble minerals, vitamins and body regulating substances. Even graham flour is sometimes made by combining a poor grade of white flour with bran, in which case it is not a true whole wheat flour. I am not blaming the millers. They furnish what they believe the public wants, and the public needs to be educated to prefer grains as nature intended them for us. In the meantime you can make a good grade of whole wheat flour with one of the little hand grist-mills on the market, and you may also enjoy the whole cornmeal containing the germ, which is usually removed from the commercial cornmeal to make it keep better. Perhaps you think it seems a step backward in civilization to take such work back into the home. We may be thankful if this war does not force us to take several such backward steps.

With our mill, which is one of the smaller ones, we find if we set it to grind coarsely, and then put the resulting coarse meal thru a second time, we get a more evenly ground product than if we attempt to grind it fine the first time. Also I find it is difficult to make light bread if I use entirely home ground whole wheat flour. We like it combined with about half white flour. The home-ground cornmeal makes fine muffins, johnnycake and cornbread with the old-fashioned flavor which we have missed in much of the modern cornmeal.

The recipes given below calling for whole wheat flour were tested with the home ground flour.

Notice that several of the recipes call for rolled oats. If you have never tried it you will be surprised to find how good oatmeal is in bread. It makes a very tender crust, and the bread is of fine texture and light in color. You may use it with white flour alone or combine it with part whole wheat. The Food Administration advises the preliminary scalding to more thoroughly cook the oatmeal.

#### OATMEAL BREAD.

2 cups rolled oats	½ cake dry yeast softened in
2½ cups boiling potato water	½ cup warm water
2 teaspoons salt	Whole wheat flour
1 tablespoon honey	White flour.

(Continued on Advertising Pages.)

WHEN the bees start their spring flying, the beekeeper begins to think about his spring work. There may be very little to be done at first, and

if the bees were generously provided with stores in the fall, as they should have been, and if they have ample room, letting them alone until the weather is fairly steady is probably about the best thing the beekeeper can do, especially the beginner. Unless upward ventilation is used, the covers are sealed down tight, and it is a pity to break the seal while chilly winds are still rampant and nights are cold. But if, upon lifting one end of the hive, it is found to be dangerously light, it may be well to investigate. Combs of honey can be slipped in without much disturbance of the hive, or a warm, heavy syrup—say, two parts sugar to one of water—may be fed in pans in the supers.

After the days have warmed up a bit more, a general inspection of all colonies is advisable. If some very weak ones are found, it is usually better management to unite them, not weak with weak but weak with strong. Then the others can be brought to about equal strength by taking brood or stores from those that have plenty to give to those that lack. This, however, is not to be done haphazard, but carefully, with system and understanding. The stronger of the needy ones must be helped first, because, you see, they are most worth while and will soonest respond to assistance, and will soonest come out from the class of the needy into the class of the givers. Do not levy too heavy a tax on these strong contributing colonies—Dr. Miller advises exempting at least four good combs of brood. When thus equalizing brood, give that farthest advanced, some already emerging, if possible. (And, by the way, let us always say “emerging” when emerging is what we mean. “Hatching” is something quite different. Worker brood hatches from the egg about 18 days before it emerges from the cell.) And in giving either brood or honey, of course care must be taken that the queen is not on the comb transferred.

Another really important matter for attention at this time, and one often overlooked by beginners, is that of providing water. Plenty of water near at hand means both time and wing conservation. When brood-rearing gets well under way, bees need a great deal of water, and if they have to fly long distances, a heavy toll is often paid in the rapid wearing out of the old bees that have already survived the winter. There are scores of excellent suggestions for watering devices, but a mere pan of water, with chips floating on top will serve very nicely. Many beekeepers put salt in the water, claiming that the bees prefer it so. I have used it

## Beekkeeping as a Side Line

Grace Allen

both salted and unsalted, but never the two methods side by side, which is of course the only proper way to decide intelligently between them. If there

is danger of the bees bothering neighbors' pumps or watering troughs, and water is to be offered them in some new places, it would be well to sweeten it slightly at first, to attract them, till they get the habit of coming to this particular spot. Care must be constantly exercised to keep the supply from becoming exhausted. If the bees cannot depend steadily upon your watering system, they are likely to go to some more dependable source, possibly either wearing out their own wings in long, unnecessary flights, or wearing out the patience of the neighbors, with their steady attentions.

A great many backlotters keep both chickens and bees. It is no unusual sight during the early days of spring to see the bees take possession of a hopper of dry mash. Many a time I have seen a flock of complaining baby chicks and a greatly disturbed mother hen, with ruffled feathers and a generally ruined disposition, fussing around the low box of bran or mash in the corner of the brooder coop. This indicates a shortage in the pollen supply. When in real need, the bees may be fed artificial pollen but not too early nor in too large quantities. Some beekeepers have successfully given rye or graham flour or even corn meal, or a mixture of several of these pollen substitutes. It is comical indeed to see the bees load up on this stuff, carrying it off in their pollen baskets like a housewife with a victory loaf. But when the natural pollens become plentiful, there will be no more bees around your meal or flour.



### MARCH.

March has set the whole world shaking,  
There is storm and sun,  
Earth and roots and hearts are waking,  
Miracles are done.

From a secret place, a whirring;  
See the sudden wing!  
All around is something stirring—  
March has brought the spring!

While the sullen clouds and leaden  
Get them grimly by,  
March has let the maples redden  
Up against the sky.

There the bees are coming, going,  
Thru the fringing trees—  
Tell me how you knew, you knowing  
Uninstructed bees!

# GLEANINGS FROM THE NORTH, SOUTH, EAST, AND WEST

## THE crop condition is not very encouraging. During the past month our section has averaged somewhat less than an inch of rain. We are confronted with conditions that have never presented themselves before and, for this reason, it is difficult to foretell conditions. The extreme northern part of the State, irrigated districts and river locations (aphid honey only) are expected to yield normal crops. Some anxiety is felt regarding a sufficient supply of water for irrigation, as the snow fall in the mountains has been extremely light. The numerous non-irrigated locations depending on spring and summer crops, are expected to suffer considerably. A large proportion of the honey produced in northern California comes from fall bloom. Latespring rains prove very beneficial to these plants, and it is now too early to predict prospects from this source. Spring work will give us more or less concern. Due to the comparatively mild winter and lack of rain, brood-rearing is much advanced for February—a very unfortunate condition when it is considered that our spring bloom, so far, has had little chance to develop. In not a few localities premature breeding is to be expected, which in many instances will result in depleted stores before spring bloom appears. The uncertainty of the spring bloom, and the fact that it will come late, diminishes the possibility of securing much increase before the harvest. Nevertheless, it should be remembered that the unexpected may happen and it would be folly not to be prepared for any eventuality. For this reason it is wise to have all equipment in readiness, to plan all work systematically, to order bee supplies now, to prepare as early as possible for good queens, and to be sure to keep ever a sharp watch for foul brood. Moreover, do not keep any weak colonies at the opening of the honey flow. The doubling up of the weak ones has never yet failed to increase the honey crop. Wherever possible, it is an excellent plan to practice migratory beekeeping. Oranges practically never fail to yield a surplus, and almonds, (February) prunes, pears, peaches and cherries give extractings when good March weather prevails. A spring such as this will pay the beekeeper, providing he is advantageously situated, to move to the above-mentioned fruits. It will pay him for no other reason than that his colonies will be brought into good strong workable condition. There are almond and prune orchardists who pay beekeepers as high as \$1.00 per colony for placing bees in their orchards. It may be mentioned that a certain orchardist has offered to pay in addition to \$1.00, the colony transportation charges to and from his yards, and also \$50.00 besides for a man to take care of the bees while in the orchard. Not only is

## NORTHERN CALIFORNIA

Reported by M. C. Richter

a beekeeper benefiting himself by means of such migration,

but he is also making it possible to increase production in a line other than his own.

Uncle Sam has obviously located our vital weak spot—brood diseases. It is a pleasure to announce that Geo. S. Demuth, one of the big guns of the Bureau of Entomology, and Geo. A. Coleman of our University, will hold a series of meetings under the direction of the States Relations Service in northern and central California, as follows:

Bakersfield meeting, 10 A. M. and 4 P. M., Apr. 1.

Visalia meeting 10 A. M. and 4 P. M., Apr. 2.

Hanford meeting, 10 A. M. and 4 P. M., Apr. 3.

Fresno meeting, 10 A. M. and 4 P. M., Apr. 4.

Modesto meeting, 10 A. M. and 4 P. M., Apr. 5.

Sacramento meeting, 10:30 A. M. and 4 P. M., Apr. 6.

The meetings will be advertised and a large attendance is expected. Mr. Coleman has requested that the promotion committee have a campaign organizer at all the meetings. Not only will his request be complied with, but also it is expected that our State Market Director will talk at most of the gatherings.

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In Gleanings for February, under "Northern California," mention was made of the appointment of a promotion committee by our State Association to form and perfect an organization campaign for collective marketing. On Jan. 26 the committee perfected two agreements, known respectively as the "Exchange Agreement" and "Marketing Agreement." The committee also temporarily divisioned northern California into the following four districts: 1st district—Kern, Kings, Tulare, Fresno, Madera and Inyo counties; 2nd district—Merced, Stanislaus, San Joaquin and counties east; 3rd district—Solano, Sacramento, Yolo, Colusa, Sutter and counties east; 4th district—Glen, Butte, Tehama and counties east and north. Each district is to be known as the Honey Producers' Co-operative Exchange, the name of the exchange to be determined when organized by the directors. The promotion committees' members according to districts are: 1st district—F. D. Lowe of Bakersfield, Fred K. Howard of Hanford, Louis Sinn of Reedley, J. C. McCubbin of Reedley, and S. A. Carhart of Big Pine; 2nd district—M. S. Dickinson of Los Banos, F. W. Burth of Modesto, M. C. Richter of Modesto, and Willis Lynch of Stockton; 3rd district—Oliver Parks of Davis, and B. B. Hogaboom of Elk Grove; 4th district—Mrs. M. E. Engles of Chico, and Harry K. Hill of

Willows. These members are now engaged in preparing campaign meetings in their respective districts. It is hoped (and, moreover, expected) that all readers of Gleanings residing in northern and central Cali-

fornia will attend these proposed meetings. Copies of the co-operative agreements will be mailed to any beekeeper who applies for them thru his district member of the committee.



## ON Feb. 2, regular meetings and election of

# SOUTHERN CALIFORNIA

Reported by L. L. Andrews

officers in the Riverside and San Bernardino clubs were held. The Riverside County club elected R. Powell, president; Chas. Kinzie, first vice president; and E. W. Horne, secretary-treasurer. This club is one of the most promising in the State and has been of much help to the members in the buying of supplies and in keeping its members in touch with honey prices. San Bernardino County club elected H. A. Wagner, president; and J. E. Mack, secretary-treasurer. Each of the clubs has selected a purchasing agent and will buy supplies and have foundation made at reduced rates to members.

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All are very glad to see the spirit of "get together and make it go" exhibited by members of the Los Angeles County club. This club has been very quiet during the past year, but the boys are determined to make theirs one of the best clubs in the State this year. Earl Shaffner is president, and J. D. Bixby is secretary.

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Beekeeping methods in Southern California are changing and honey production is becoming more the business of specialists. The school teacher with 100 or 200 colonies of bees is adding a few more apiaries, and in many cases these school teachers are living in hopes of being able to give up the teaching. Some business men would like to put money into bees if they could get a good man to run them.

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Keep those hives in which the bees have died and those showing any disease away from the clean apiary. A hospital yard is becoming quite a popular way to handle the disease if there is enough to justify it. If there are only a few colonies, I would destroy the bees and make the combs into wax. I also think it pays to select very carefully and melt all combs with drone cells or those containing pollen. I have made a number of tests and find that the average Langstroth comb will give about  $5\frac{1}{3}$  ounces of wax, if one gets it all. The amount of wax one gets, in excess of that necessary for replacing the foundation, pays very well for the labor, besides furnishing a lot of fine new combs for the next year.

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A series of beekeepers' educational meetings has been arranged for by the State University in conjunction with the U. S. De-

partment of Agriculture. Mr. Demuth, assistant apiculturist,

and E. F. Atwater, special field agent, and Prof. Geo. A. Coleman of the State University will be present to assist and advise beekeepers in any way they can concerning treatment of disease and the production of honey. Meetings will be held in the southern part of the state as follows: Lonipoc, March 4-5; Ventura, March 6-7; Piru, March 8; Santa Ana, March 9; Ramona, March 11-12; El Centro, March 14; Riverside, March 16-18; Redlands, March 19-20; Ontario, March 21; Los Angeles, March 26-27; Pasadena, March 28-30.

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This is the driest season to date, Feb. 1, since 1861, so say the reports. There has been one light rain, ranging from  $\frac{1}{2}$  in. in some localities to  $1\frac{1}{2}$  ins. in others. This small amount is not enough to help the honey prospects, unless more comes soon. Honey plants that usually begin to show new growth in January are very dry and show no signs of putting out new foliage. Most beekeepers are optimistic still and say we will get plenty of rain yet. Altho the season has been unusually dry, it has been warm and a few plants, on irrigated ground, have furnished considerable honey for building up. The eucalypti in particular have produced an abnormal amount of honey and in a few instances have filled the hives to such an extent that several hundred pounds have been extracted.

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In visiting Mr. Dunlap's apiary of 200 colonies Feb. 1, most colonies were found to have little or no brood. This apiary is located near Beaumont, at an elevation of 3,000 feet and the forage is considerably later than in the lower valleys. Part of this apiary has just been sold and the bees are to be moved to the oranges at Redlands, 15 miles away. Mr. Dunlap relates an interesting experience that happened a few years ago. He had one hive that was always full of bees and brood and produced remarkable crops of honey. Another colony had plenty of bees and brood and yet produced little or no surplus honey. He destroyed the queen from the poor producer, and introduced the queen from the good colony on two frames of her own brood. She remained in the hive for two or three years, and little or no surplus honey was gathered. Can any one explain?

[The case referred to, of moving the queen from the good colony to the poor one, is not a new one by any means. A whole colo-

ny of bees will form a habit of being good workers or poor workers, and changing the queen will not always produce the desired result till a year later. Reports have shown that even after the new stock has taken the

place of the old, the new bees seem to follow in the wake of their predecessors, providing both stocks are of the same season. If a whole year elapses then the real blood of the queen shows up.—Editor.]



WITH the exception of several lots mentioned

below, all honey produced in the southwestern Idaho territory, both comb and extracted, was sold early in the fall of 1917. The price received for extracted ranged from 12½ cents to 15 cents. At the annual field meet of the Idaho-Oregon Honey Producers' Association, held Jul. 10, a price of 12½ cents on extracted honey, in five-gallon cans, was set, with instructions to the secretary-treasurer to get as much higher price as possible. At the same time the price for comb was set at \$3.25 for fancy, \$3.00 for No. 1, and \$2.75 for No. 2. The comb-honey crop was sold, first sales, at the price fixed; later the price was advanced 25 cents per case, and some comb was sold at that figure. Small lots of comb not packed by producers in time to be included in cars shipped by the Association have since been sold on the Pacific Coast and shipped by local freight. Odd lots of extracted in five-gallon cans remaining in the hands of producers have been disposed of in the same market. No stock is left in this section except a few small lots of 5- and 10-pound pails, together with one lot of extracted in glass containers. This will undoubtedly be sold within a short time. Very earnest inquiries are still being received for comb and extracted in car lots.

A Coast firm handling large quantities of sage and orange honey purchased one of the odd lots of extracted just mentioned. Com-

## SOUTHERN IDAHO

Reported by P. S. Farrell

menting upon quality, they advised that this honey was considered by them as one of the best lots they ever received.

Southwestern Idaho is experiencing a remarkably mild winter. Severe freezing weather in October was followed by mild weather which continued over the proverbial "green Christmas." In December and early January bees were flying continually, and one large producer reported brood on four frames. I saw dandelions in bloom in protected spots; pansies bloomed in the railroad station park in Boise, and reports were made of lawns being cut the last week of December. Some apprehension was felt lest breeding continue to such an extent that stores would be curtailed, but since that time we have had sufficient cold to confine bees to hives. With no honey in the hands of producers, and sugar unobtainable in quantity, the matter of feed, should feeding be necessary, is something to be considered. Steps are now being taken to get in touch with honey suitable for feeding.

Certain honey producers in southern Idaho, with yards totaling from 500 to 1,500 colonies, claimed exemption from military duty. Information is now at hand that one Idaho exemption board investigated a number of these claims, and it is since noted that some beekeeper claimants have been dropped to one of the lower classifications of the draft.

Feb. 5, 1918.

P. S. Farrell.



TO demonstrate the possibilities of Wisconsin bee-

keeping, the State Beekeepers' Association offered in the spring of 1917 premiums for the greatest number of pounds of comb honey from a single colony (the product of one queen bee) and a like premium for the greatest number of pounds of extracted honey from a single colony. Notices were sent to Wisconsin beekeepers and advertised in many local papers. Contests closed Sept. 3, 1917. H. H. Moe, of Woodford, Wis., won first on comb honey, and Fred Alger, of Waukau, on extracted honey. Mr. Moe had 97 finished sections, sold at 20c, \$19.40. His bees were removed from cellar Apr. 11, 1917; no spring feeding or spreading of brood; the

## IN WISCONSIN

Reported by N. E. France

first super had some unfinished "bait sections"; the

young queen of fall of 1916. In May following, had hive full of working bees, which swarmed early; queen cells removed; colony returned. Hive entrance enlarged by raising hive body from bottom-board and adding as needed more supers of sections with full sheets comb foundation; Sept. 3 this colony had 97 well-finished sections comb honey which was displayed at the State Fair. In same apiary another as strong colony had all sections with full sheet foundation, and no "baits" with result of a much less number finished sections and several unfinished. Mr. Alger's prize-winning colony produced 210 lbs. of

extracted; sold at 15c, \$31.50. His bees wintered in an underground cellar, removed in April in good shape; were fed a little to stimulate brood rearing up to June 15; large space was given queen for brood rearing; on Jul. 8 this colony swarmed, and returned to the eight-frame hive of full-sheet comb foundation and queen-excluder on top with another hive like this above; lower hive-body raised one inch for better ventilation; as fast as needed more hive bodies with foundation were added, each time giving new super next to brood chamber; Aug. 25 the supers of honey weighing 300 lbs. were extracted, getting 210 lbs. of white honey, which was displayed at the State Fair, sold to Wisconsin University at 15 cts., and displayed at the State Beekeepers convention at Madison. There were enough winter stores left in the colony, which was examined Oct. 11, and found well supplied. Mr. Alger says he would have received still more

from this colony had he removed all queen cells in the old hive at swarming time and placed it above the hive with queen and full sheets of comb foundation, using queen excluder between. Combs are attached to bottom-bar better from full sheets of comb foundation placed above a queen excluder than from those below.

Many Wisconsin beekeepers are now asking where and how to get feed for spring feeding. I am glad February Gleanings printed an article on that subject.

Snow in southern Wisconsin is now 18 inches on the level, which means clover is well covered. Northern Wisconsin has less snow.

Wisconsin bees are wintering well except those in single-walled hives outside.

Next week I will be in Madison, planning the season's work of the State against bee diseases. N. E. France.



IN our last "notes," it was stated that the month

of December was bitterly cold and now the same must be said of the January just past. Colder even than the former month with almost continuous below-zero weather without even the slightest thaw. Officially we are told that it is 50 years since we have had a January with as low a mean temperature for the month, and unofficially many of us will say it was the meanest too for that matter.

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On page 89, Dr. Miller asks why nothing is said about packing on the bottoms of hives. While I still have quite a lot of old hives with bottom packing, and said bottoms are rapidly rotting out—one of their failings by the way—needless to tell you, Doctor, that all new-packed hives or packing cases have none of this packing in the bottom. I do not wish to get into a scrap with any scientific man on this subject because of the surety of being worsted, yet the simple fact is that, in common with other beekeepers, I find no difference in results whether bottoms are packed or unpacked.

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Going thru the grocery department of a large departmental store last week, I found that they had not a pound of extracted honey altho they usually handle between two and three hundred thousand pounds each year. Moreover, they did not know where to get more. All the honey they had for sale was a small supply of comb from Nevada. Doubtless a car-load had been brought thru by some wholesaler in the city. It was retailing for 28 cts. and 30 cts. per section according to grade. Some of the honey was "weeping" badly but there was

## NOTES FROM CANADA

J. L. Byer, Markham, Ont.

little breakage in what I examined altho the honey was very

poorly fastened to the sections. In many cases the sides of the sections were only touching the wood in two or three spots, the bottoms not touching at all, and I judged that only starters had been used. How this honey came thru the long haul without being all smashed up is a wonder, but of course some may have been smashed for all that I know as I am just speaking of the few cases I had the privilege of inspecting.

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Not long ago a certain doctor in Illinois, famous as a dispenser of bee lore, made some comparisons in the matter of climate of said State and that of Ontario, inferring that they had much more wind to contend with than we have over here. An editor also backed him up in these contentions. Most earnestly did we wish for the privilege of having both of these gentlemen with us on Jan. 12 and letting them stand exposed for an hour or two to the gentle breezes that were blowing on that date and for a few days in succession for that matter. Methinks that they would be ready to admit that we have some wind here in Ontario and that it was cold enough too. On the night of Jan. 11 we had a light snow-fall from the east with moderate temperature, and then about 8 o'clock A. M. of Jan. 12 the wind changed to the southwest, the temperature dropped to 15 below and the wind had a velocity of 60 miles an hour. This continued for over 48 hours giving us the coldest and most severe storm on record. Many hives of bees were fortunately covered up with snow but others facing south and having no protection from that direction,

had the snow swept into the entrances with such force that it was driven up among the combs and the space under the combs packed solid. Our hives are lower in the front than in the rear so that in most cases the snow thawed and ran out of the entrances but in a few hives we had to clear the entrances of ice.

How this continuous cold weather (no change at this date, Feb. 2) will affect the bees outside is still a matter of conjecture but it looks as though the cellar winterers will have their innings this season. Two-thirds of our bees are almost completely covered with snow, many of the hives with snow over the tops two feet or more deep and this snow is solid too. But I have better

hopes for them than for those all uncovered, as I find after having dug down to a couple that quite a large open space has thawed around the front and the entrances of the hives and that the bees are quiet. Should we have mild weather soon, conditions would be greatly improved but we have no signs of such weather yet.

While I have the floor I would also like now to say to the two aforesaid gentlemen, that this year will prove again the fallacy of providing a "winter nest" for outdoor wintered bees. Do all you can in the fall to get rid of the "winter nest" and the bees will get along splendidly, even if combs are about solid at the beginning of the winter.



TEXAS is able to join in the chorus, "This is the

## IN TEXAS

F. B. Paddock, State Entomologist

hardest winter in many a year." The cold weather of January was a record-maker. From the prospects at this writing it looks as if the drouth record of the past two years will be equalled, if not surpassed. The unusual snows have resulted in some good, for in a few localities the spring weeds have been able to get enough moisture from the snow to germinate.

In the extreme southern part of the State brood rearing began by the first of February, and, altho the honey prospects were only fair at that time, the bees were gathering considerable pollen. In the extreme western section of the State an early spring was enjoyed. The winter rains were enough to give an early flow of honey.

Wherever weak colonies went into the winter they are dead now; the extreme winter was more than they could withstand. The beekeeper who says, "I do not know how my bees are—I have not seen them since last fall," will have a surprise coming when spring inspection is finally made. There are others who did no feeding as they expected to sell the remains of their apiary this spring. Such beekeepers will not realize a penny. From every section comes the report that all bees that were not fed died at least during the late winter. Some of the "gum" beekeepers have felt that this spring would be a good time to sell their bees and they are due for a disappointment. With fair offerings of bees in most every locality, the question arises as to the price to be expected for a hive. Those who are buying are not in a mood to give much for most of the colonies that are for sale.

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Spring management is a term that is new to many of our beekeepers. Yet during the latter part of January in the southern part of the State some of the beekeepers had examined their colonies and learned the exact

condition of every one. Much can be done in the early

spring to save the weaker colonies and to get all started so they will build up readily for the early honey flow. In some instances there will be found to be an excess of stores on a few hives and this can be distributed among several of the weak colonies. Many a colony of bees has been saved by a frame of sealed honey. Those who are not so fortunate as to have excess honey in frames or otherwise should plan to feed an artificial feed. Those who have the most bees are usually the ones who are most anxious to save every possible colony. Feeding on an extensive scale was conducted by some in the southern part of the State during the latter part of January and thru February.

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A meeting of the county apiary inspectors of Texas was held at College Station on Feb. 11 and 12. This conference of inspectors resulted in great good to all in attendance, and was considered a big step in the scheme of general improvement of the inspection service. The meeting consumed two days, during which time several profitable lectures were given and experiences were exchanged.

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Sugar for the feeding of bees is still available thru the Texas Honey Producers' Association of San Antonio. Not enough beekeepers are availing themselves of this opportunity to obtain sugar with which to feed their bees. Empty hives can not produce honey during the season of 1918 with which to aid the sugar shortage of the world. Never in history has honey been so popular as it will be during the season of 1918, and every effort should be made to produce every pound possible.

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Frank C. Pellett, staff correspondent of the American Bee Journal, on Feb. 20 began a seven-weeks tour of the State. He is to

make a study of apiary conditions in every important beekeeping section of Texas. At every place where a meeting can be held Mr. Pellett is giving a lecture under the auspices of the county demonstration agent and the county beekeepers association. Much good will result from this trip, as many beekeepers will avail themselves of the opportunity to talk with Mr. Pellett, and he will be able to see and better understand the beekeeping conditions of this state.

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The pound-package trade of bees is attracting the attention of many beekeepers all over the state. This business reached large proportions last year thru the efforts of Dr. E. F. Phillips to equalize the honey shortage of Texas with the bee shortage in the Western States. Many beekeepers last year were not in a position to ship bees on account of the lack of cages. Many who did ship in the available regulation cages were far from satisfied with the results. Since last season the larger shippers have put much thought on the problem of cages, and now we find that several styles will be seen in the trade this season. As a rule, these cages will be considerably larger than those used last year. The prevailing idea was that some of the loss last year was due to lack of ventilation. There is a tendency to adopt the syrup feed and to discard the candy feed. All of the shippers agree that

with the best of facilities for handling this trade it can never develop until they have the co-operation of the express companies. Negotiations have been conducted with the express companies with a view of bettering the service given the beekeepers in this trade of pound packages of bees. The committee representing the beekeepers has met with excellent response from the express company, which seems willing to learn all that is possible about this comparatively new industry in order that it might further develop. Suggestions were submitted to the company on the care in handling this commodity. These will be sent to all of the agents and messengers. In turn, a uniform label was suggested to the beekeepers which contains the chief points in the care of these packages. Assurances were given that claims coming to the company from this trade would be more readily adjusted in the future than they have been in the past. The importance of this industry has not been fully realized by all of the large beekeepers of this State. This trade is fast passing the experimental stage, and, with the help of the express companies, the transportation troubles will be removed. The demand for pound packages of bees will not be met by the beekeepers of this State this year. This trade offers possibilities which should be especially attractive this year when the honey prospects are not particularly promising in some localities.



ON Feb. 1,  
the Tennessee  
see Bee-  
keepers' Associa-

## THE DIXIE BEE

Grace Allen, Nashville, Tenn.

tion met in annual convention in Nashville, at the Hotel Hermitage. Owing to weather and transportation conditions, several hoped-for speakers did not arrive. Chief among these was Dr. E. F. Phillips, who did, however, send a telegram explaining these conditions as the ones that detained him, expressing his regret and advising beekeepers to buy up any non-productive colonies of bees of which they might know, and work them hard for a big honey crop this summer. Others who couldn't get to the meeting to take their places on the program, sent in papers to be read, and so added to the general interest of the occasion.

Dr. J. S. Ward, president of the Association, as well as State Inspector, presided, and in his opening address he gave the key note by stressing the necessity for better beekeeping and closer co-operation. E. J. Adkisson of Nashville presented an excellent paper on "Transferring." This is an important subject in Tennessee, owing to the large number of box hives still in use, and it was ably handled by Mr. Adkisson.

A particularly fine and impressive talk was the one on "Honey is Better Than Sugar,"

by Miss Geneva  
Conway, Specialist in Home  
Economics, Division

of Extension, Knoxville. This important subject was handled with the convincing skill of one thoroly conversant with the matter in hand. When Miss Conway finished, there was no doubt in the minds of her hearers as to the superiority of honey over sugar.

Mr. Ebb Thomae, County Agent, spoke of the increasing interest in beekeeping among the farmers of his (Davidson) County, mentioning his own effort to bring the subject prominently and favorably to the attention of farmers not yet interested. Talking on "Tennessee Queens," Ben G. Davis was of course perfectly at home, discussing many methods followed in his own and his father's queen-rearing yards.

But the special feature of the convention was the presence of E. R. Root. In fact, Mr. Root was without doubt the one big splendid feature of the day. Everyone was glad that the weather conditions did not deter him from coming, as his presence and his illuminating talks made the occasion one long to be remembered by all those fortunate enough to be present. If there was any subject that Mr. Root did not touch on voluntar-

ily in his remarks, it was sure to be brought out by some one's question; and politely, pleasantly, enthusiastically, Mr. Root answered them all. And they were many, likewise varied. Particularly pleasing were Mr. Root's personal reminiscences and his references to some of his father's experiences. Then thru it all there was his unfaltering and contagious enthusiasm, and his never failing friendliness.

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Referring again to black locust, which I mentioned in January as being rapidly cut out in this section, I notice in a daily paper that the Forest Reserve, to prevent confusion in identity, is calling attention to the differences between the black locust and the honey locust. "In some localities, the names applied are exactly reversed, the honey locust being known exclusively as black locust, and the true black locust being known as honey locust." It really isn't strange that the black locust is sometimes called honey locust, for it is the nectar-bearer, worked by the honey bee, while the only claim of the honey locust to its name lies in the gummy sweetish deposit in the ripe pods. The true black locust (*Robinia Pseudacacia*) has close-grained, durable, very hard wood, compound leaves with smooth margins, short thorns arranged in pairs, and seed pods from 2 to 4 inches long. The honey locust (*Gleditsia Triacanthus*) has coarse-grained wood of an inferior quality, leaves of the compound type but scalloped along the edges, thorns several inches long, often divided into three or more branches and often in great clusters on the main trunk, and pods from 10 to 18 inches long. If the wooden ship program is to be abandoned, the demand for black locust may slacken, as it has been used for treenails to fasten the planking to the ship's ribs.

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What does one say when the weather grows quite out of bounds of polite conversation, and there are no conventional

phrases left that fit the need? That is my present trouble. It had seemed as tho this winter, from mid-December to date, deserved comment as lengthy as vigorous. But somehow I can't find the words. However, it is the undisputed truth that we have had some weather. The thermometer, repeatedly flirting with zero, repeatedly fell. "Ten degrees below," the weather bureau reported one time, and various lesser degrees below at various other times. Now 10 degrees below zero is a most un-Dixie-like temperature. I wonder how the Dixie bees have fared thru these weeks of frozen weather. This winter should surely be a test of wintering conditions. Altho I don't know but a warmer winter, with a great deal of rain instead of a great deal of snow, might be worse; or a winter with more frequent variation of temperature, and more damp, thawing days, might also be worse. We await the spring with keen interest.

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Go way, zero, don't you see  
I'm an unpacked Dixie bee?  
Freezin blizzards aint no fun—  
Wind breaks? Aint got nary one.

\* \* \* \* \*  
Mr. Root sez some folks thinks  
That its morally surprisin  
Bout the bees in winter time  
Bein bugs on exercisin!



Dixie Bees in January, 1918.

A WEEK of warm weather has at last brought the

Florida bees to life, and they are now hustling after water and bringing in heavy loads of pollen. It was too cold in January for them to work in the maples, but now the jasmine, willow and huckleberry are in bloom. The wild cherry and plum trees are in bud, the orange is showing the first signs of new growth, and everything points to the coming of spring and a busy season with the bees. Let us hope that it will be a more prosperous one than 1917 and 1916.

The unusually cold winter has left bees here in first-class condition. They have used

## IN FLORIDA

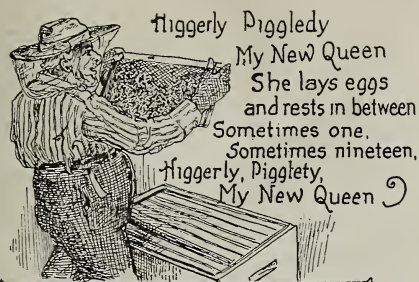
Reported by Harry Hewitt

much less winter stores than usual; the colonies seem strong as they were in the fall and there are no piles of dead robber bees in front of the hives. The orange groves are in fine shape, and prospects were never better for a big bloom. Whether we get anything from it remains to be seen. Yesterday (Feb. 5) I was in the apiary and heard a queen in the air. I chanced to stop at the right hive and saw her alight. She then took two other short flights before finally entering the hive. This was an old queen, raised last September—not a virgin. What was she doing in the air at this time of year?

## HEADS OF GRAIN

FROM

## DIFFERENT FIELDS



*There was an old Drone, and, what do you think?  
He lived upon nothing but nectar to drink!*



*Honey and Pollen were the chief of his diet,  
And yet this old drone could never be quiet.*

### Great New Fields That Invite the Beekeepers' Attention.

I live in southwest Wisconsin where, during the last 10 years, the white clover has not failed to yield a fair-to-good crop of surplus. In Grant County, just across the Wisconsin river from my home, there are only two or three extensive beekeepers. The district is hilly, the soil rich and the whole face of the country is covered with white clover, while in places there is quite a sprinkling of sweet clover. It is capable of producing large amounts of the very best honey, but the bees and beekeepers are lacking. The same can be said of the whole of southern Wisconsin. Yet it is a question whether southern Wisconsin, with its pastures of white clover and clear spring brooks, is a better field than the central parts of the state and parts farther north.

I am informed that in Wood county, a considerable amount of honey is often secured from white clover and basswood, and after they are gone that colonies sometimes store 100 pounds of surplus per hive from the asters and autumn flowers. Great marshes will be covered with this bloom that produces a light amber honey that is preferred by some to the clover and basswood honey.

North of Iron Mountain, Mich., across the Wisconsin line, are a great many acres of

cut-over land. It is rather rough and there is lots of granite, but I have never seen the clovers grow so profusely as they do there, and right in the brush, too. In the more open spaces there were great sheets of white clover all out in bloom and standing 12 to 16 inches high. Nearby there might be another great patch of alsike all out in bloom among the brush. The cut-over lands were covered with yellow and white sweet clover as well as mammoth and common red clover. There were other clovers that I had never seen before, all in bloom—and not a bee in the country, and very little live stock. Now, how would such a country as that be for honey production, considering also that there were a great many splendid hard maples and basswoods in the forest? It seems to me there is the chance for a fortune for any one who would put in some good apiaries in that country.

Recently the bee journals have told us about great districts in the South where sweet clover has covered hill and dale, making it a grand country for beekeeping. Also we are informed that in the region northwest of Sioux City, Iowa, stretching thruout the western part of the Dakotas, in what is known as the dry belt, the sweet clover is taking the country for the country's good. This will be a splendid field for beekeeping, as dry weather is always best for honey secretion. Thus we have in widely separated districts of our land, openings for thousands of apiaries. If honey is going to come into general use, more young men and women must be induced to devote their time to its production, and where is there a more inviting field today?

I feel sure that some one, yes, as many as possible, should go to work to save some of the honey that is going to waste in these splendid fields that I have mentioned. The world wants honey. Are we going to supply it?

Bridgeport, Wis.

Harry Lathrop.

### How a Breeder Could Have Saved a Customer Trouble

After reading in the December issue the different breeders' experiences, I write you from the purchaser's view point. Last spring I decided to try some bees in packages from the South and compare them with my bees wintered outdoors. I ordered one five-pound and two one-pound packages, with queens, to be delivered April first. They arrived Apr. 14, in fair condition, with the queens in separate cages. After some difficulty I opened the cages and found the queens in the mailing cages dead in the five-pound package and one dead in one of the one-pound packages. As I did not like the idea

## HEADS OF GRAIN FROM DIFFERENT FIELDS

of the delay necessary to get the other queens from the breeders, I decided to unite with several of my weaker colonies. It was about 5 p. m., weather fair, no wind, temperature about 50 degrees. I sprinkled the bees with thin sugar syrup and shook the one-pound and also the five-pound package. In both cases fighting followed, which resulted in both queens being killed. The next day the package having the live queen, I shook onto drawn combs partly filled with pollen and honey and freed the queen. I also gave them the brood with adhering bees from the hive containing the pound package that had just killed their queen. After removing the frames I noticed a small cluster on the bottom-board which I shook on top of the frames—when, lo and behold! the cluster contained a virgin queen. I caged her immediately, as she was the cause of the destruction of the original queen in the hive and also of the one in the cage. An examination of the five-pound package also revealed two virgins running over the combs. The breeders no doubt had their troubles last spring, but those at my end of the line could have been avoided by the shipper's pasting a direction slip on the cage advising which end to open and cautioning to look out for queens being loose among the bees in the package. They surely had had this trouble before and should have given warning accordingly.

Baltimore, Md.

M. R. Delaney.

### Beekeepers Get Sugar for Feeding Just the Same.

Beekeeping in Switzerland could not long be carried on without liberal feeding of sugar for winter stores every fall. The conditions for beekeeping are not nearly as favorable in Switzerland as in the United States. The seasons seem to be so short in Switzerland and the honey flow so early that only by the very best management with extra strong colonies of a non-swarming race can surplus honey be obtained. Most of us honey-producers would miserably fail, if

our honey-flow came in May and then ended. The Swiss beekeeper must figure closely. His bees must winter perfectly, must not swarm and must fill the extracting supers before June. The colony of bees that does this is not likely to store much honey in the brood-chamber, for a good colony will keep the broodcombs full of brood during May to the exclusion of stores, and when fall comes the beekeeper finds no stores whatsoever in these broodnests, and must resort to feeding substitutes. This has become such a universal practice that provisions are made by the Swiss government so that 15 kilos of sugar (33 pounds) per colony for feeding purposes has been supplied to the beekeepers at a low cost. At present, the beekeepers are handicapped in Switzerland as much as we are in America. Sugar cannot be obtained in sufficient quantities to meet the demands of the people even for table use, let alone for bee-feed. Yet the Swiss government has granted the beekeepers an allowance of eight kilos (about 17 pounds) per colony. I suppose the beekeepers had to fight for this allowance for they could not show that they produced enough honey to offset this expenditure of sugar. In fact, they made but little attempt along this line, but laid most stress upon the fact that the honeybee was a most necessary factor in the economics of horticulture, as distributors of pollen, without which fruit culture would suffer immensely. This seems to have been the convincing argument with the Swiss government. The advice is given in the leading bee journal of Switzerland to take only good colonies into the winter, to unite weak ones, to weed out unproductive stock and to supply the selected colonies with sufficient stores but in fewer combs, six or eight at the most. This is along the same line as advocated in American bee journals, a practice which had followers here 30 or more years ago. In uniting colonies it is advised to hold the to-be-united bees separated at first by wire screen; then let them unite by the candy method.

Naples, N. Y.

F. Greiner.



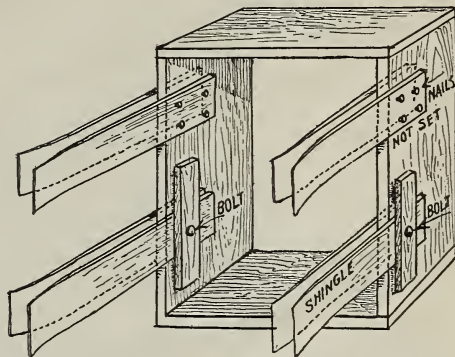
Better Beekeeping is Coming Fast in North Carolina. Above is Printed a Picture of the Members of the N. C. State Beekeepers' Association Who Attended Their State Convention Held in January.

# HEADS OF GRAIN FROM DIFFERENT FIELDS

## Effective Form for Nailing Supers.

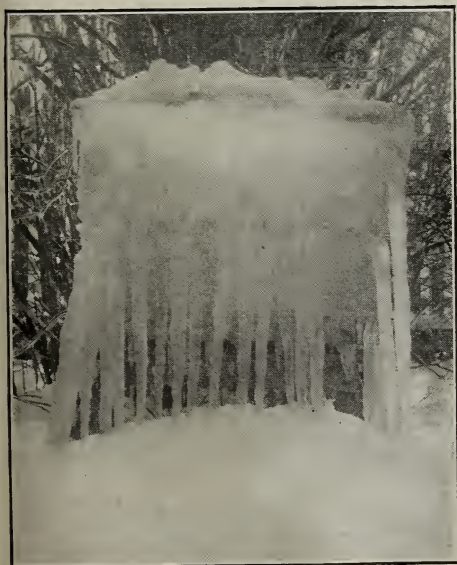
For a form I make an absolutely square super and nail the corners solidly. On the sides of the super I nail eight common shingles, (or other thin material) as shown in the illustration. The curve in the shingles (such as we have) makes the insertion of the sides of supers, to be nailed, much easier. If thin, straight material is used it would be better to chamfer the ends for an inch or two so as to answer the same purpose as the curve in the shingles. In case a good many supers are nailed each season a permanent form should be made. For this, four pieces of 1x2 in. material about 16 ins. long and four 1/4x4 carriage bolts are needed. The strips are bolted, one on each inside and one on each outside of the form-super, over the shingles, as shown in the illustration. The continued shoving of the sides, to be nailed, between the shingles will loosen them in time if only nails are used, but when held by the strips and bolts, the shingles will stay rigid until worn too thin to hold the sides snugly. When using the form, I nail or bolt it to the table about a foot from the edge where I stand, place a pile of sides on one side of the form-super, a pile of ends on the other and a shallow box of nails on the top. Then I am ready for business. I take two sides, one in each hand, shove them in place between the shingles and tight up against the form. Then I put on an end, nail it from the top, grasp the sides again, pull them out, reverse them

by letting the nailed end drop over toward me, shove back into place again and nail the other end. When I pull it out, it is ready to lay on its side and nail, and I am sure of a perfectly square super without troubling



Simple, Inexpensive and Time-Saving Form for Nailing Supers.

to put the square on it. Moreover, the form only takes five minutes to make and yet it enables one to work twice or three times as rapidly as without it. E. C. Hardie.  
Burford, Ont.



A Beehive at York, Pa., That Might as Well be an Ice House.

## That Hot-Wax Method of Stiffening Foundation.

On page 12, January Gleanings, is described a method of stiffening foundation by painting it with hot wax, as reported by J. W. Tinsley, of Ames, Ia.. While I do not know how Mr. Tinsley applied the wax, I can say that in my experience, strengthening foundation with melted wax is anything but satisfactory, in general. Last spring I had 750 frames filled with foundation, and tried running beads of wax from top to bottom of a few sheets with a wax tube. The result being satisfactory, I treated the whole lot in the same manner, putting on from three to five beads to each sheet, but had cause to regret it soon. While it was a success with a few colonies, many of them built burr combs out from the beads, and most of them built a large number of drone cells along the re-enforced places. So it may be best for any one trying the method to be conservative.

Lebanon, Ore.

H. E. Weisner.

## Comes to the Defense of the Peterson Melter.

After reading J. L. Byer's opinion of the capping-melter on page 935, December Gleanings, I would like to say I have been using the Peterson melter for four seasons and think it a great success. In fact, it doesn't

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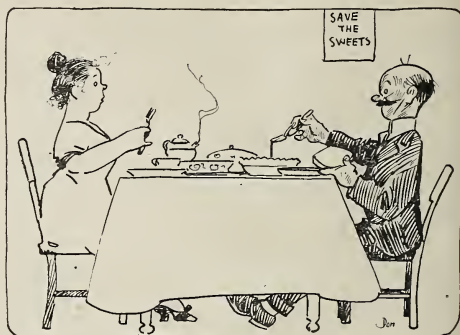
seem as if I could get along without it. Mr. Byer says the honey that goes thru the melter has a "slightly cooked flavor." Yes, it has, but it is not very pronounced, if the melter is run right. If this honey is mixed with that which comes from the extractor it is so slight that we doubt if one person in a thousand would know it. From the thousands who have eaten our honey we have yet to hear any complaints. One time I sent a sample to the Colorado Honey Producers' Association. They said the body was good and flavor fine. I can't understand how he could have the troubles he tells about—waxy particles clogging up strainers and getting on the inside of the tank, etc. The honey as it comes from my melter is in the very best shape to strain, it is warm and as clear as water. As to its being too hot to work by, that depends on the system of production one uses. With mine it is just what I need. He says he has been draining his cappings as best he could. I have been thru all of that—barrels, boxes, tanks, etc. No more of that for me. Of course there are a few kinks in running a melter, as well as anything else. I would hate to think I would

have to give mine up for some of the things shown from time to time.

Corvallis, Mont.

Frank Morgan.

[We feel rather inclined to agree with Mr. Morgan in his defense of the Peterson melter. The only chance for injuring the flavor of the honey is to allow the cappings to dam the melter, thus retaining the honey too long in the melter.—Editor.]



Adam Leister's Apiary Near Gleanings' Home. That Furnishes the Editors Much Valuable Data. It is Located on the South Slope of a Hill, and is Shown Here as It Appeared in Early February.

"ENCLOSED find nine shillings, nine pence, for subscription to *Gleanings*." — L. W. J. Deuss, Prisoner of War, Fort Johnston, Nyasaland, Africa.

"Severe weather on bees. Expect heavy loss."—Chas. Cargo, Gallia Co., Jan. 11.

"My bees have been snowed under about 15 inches ever since Dec. 1."—A. M. Winn, Grays Co., Ky., Jan. 23.

"I can't help but feel sorry for the man who has all the bees he wants."—J. J. Wilder, Manatee Co., Fla., Jan. 15.

"Three of us meet every Friday night for study and discussion of beekeeping."—Henry T. Martin, Carter Co., Ky., Jan. 24.

"All bees in this country are in boxes and logs. 'Bees ain't no good here,' is the general remark."—J. H. B. Hall, Shelby Co., Ala.

"Clover conditions are very favorable and I am dreaming of a bumper honey crop."—Eugene Busler, Washington Co., Ark., Jan. 23.

"Sixty per cent of my colonies are dead. I believe this condition will be general in this locality."—Daniel Love, Worcester Co., Mass., Jan. 19.

"A life like A. I. Root's ought to be held up as a shining example to the youth of the whole country."—B. R. Stannard, Pittsburg, Pa., Jan. 10.

"Among my outfit is a Langstroth-Root portico hive that has been in constant use since 1872. How is that for lasting?"—S. B. Myers, Memphis, Tenn.

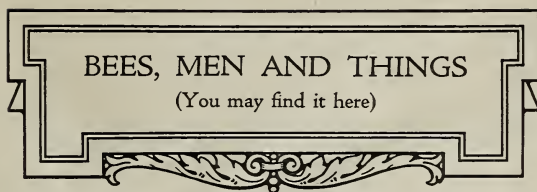
"A good yield of both grain and honey has been produced in this valley when rain held off until March."—S. A. Niver, Montecrey Co., Calif., Jan. 17.

"My bees had a good flight on Jan. 24 and 25 for the first time in two months. They did not get it any too soon,"—M. B. Gill, Logan Co., Ky., Jan. 28.

"Bees are doing finely so far; had no snow until Jan. 10, and the mildest winter we have ever had."—Mrs. Margarete Green, Washington Co., Idaho, Jan. 15.

"I predict heavy winter losses in this part of country. One reason is a very poor quality of honey and not enough of that even."—Amos Miller, Tuscarawas County, O., Jan. 2.

"The largest yielders of honey in Cuba are in this order: First, campanilla blanca or aguinaldo; second, royal palm; third, sugar cane."—Urbano Trista Perez, Santa Clara, Cuba, Jan. 4.



## BEES, MEN AND THINGS

(You may find it here)

"Bees have been gathering nectar all winter from eucalyptus. Two swarms issued last Saturday, Jan. 26, in this vicinity. All colonies busy storing pollen

and brood-rearing well advanced."—Allen Jenkins, Los Angeles Co., Cal., Jan. 28.

"We sell nearly all of our honey right at the house in 50-pound lots or less, and have received 25 cents per pound for all we have sold this season."—D. D. Piper, Butler Co., Kans.

"There is no use of my saying anything good for you because all that has been said, and there is no use of me saying anything bad for you have already heard that."—Oscar Dines, Syracuse, N. Y.

"Please send me a smoker of large size with a light spring. Remember that the light spring is the indispensable thing."—Dr. C. C. Miller, Marengo, Ills., to the A. I. Root Co., July 2, 1917.

"I have enlisted in the Signal Corps, Pigeon Section. The pigeons were my first love, so naturally I turn to them now. I have let my bees out on shares."—Leland B. Davis, Sonora Co., Cal., Jan. 20.

"My bees are wintering very nicely in my cellar, but I fear for unpacked bees outside, as there have been seven weeks or more of continuous cold weather."—Harry W. Beaver, Bradford Co., Pa., Jan. 25.

"Bees are dying all over this locality. Every day some person asks me about their bees being dead or out of stores. Extreme cold during December and January."—Fred H. Drury, Putnam Co., Mo. Jan. 25.

"In our immediate locality I think bees have been fed as much as heretofore; but the severe winter will likely cause a heavy loss to those who winter outside."—Earl M. Nichols, Franklin Co., Mass., Jan. 28.

"Have had only one-fourth inch of ice twice this winter and frost but a few times. Have had excessive rains with warm weather. Bees appear to be wintering well."—J. J. Crydennan, Skagit Co., Wash., Jan. 18.

"Honey is the one crop of importance which does not need to be sown or cultivated, but needs only to be harvested."—A. I. Root, quoting approvingly from B. F. Kindig, State Inspector of Apiaries, Michigan.

"You will be interested to know that Tom, Jr., who has the whooping cough, is at present eating large amounts of honey and I find that it helps his cough considerably. I am doing quite a bit of experimental work with honey. Among other things I have found that it is absolutely delicious

for sweetening coffee."—Ida C. Bailey Allen, Specialist in Home Economics, New York City, Jan. 18.

"So far this has been a very hard winter in this section of the country, deep snows, very cold winds and even blizzards. A large beekeeper here says he believes the bees will freeze."—Claude Barber, Jasper Co., Mo., Jan. 20.

"I put 80 swarms in the cellar and they are doing fine. Temperature is 45, and on outside today is 20 below. We have about nine inches of snow. Hope this stays on as it protects the white clover."—W. W. Boutilier, Hancock Co., Iowa.

"My bees flew Nov. 15, but have not flown since. The blizzard of Jan. 12 covered nearly all of my colonies with snow, but the snow melted from the entrances and all colonies are still alive."—Will L. Tower, Oakland Co., Mich., Jan. 20.

"I have taken Gleanings since and before 'Blue Eyes' was a baby, and I can't do without it. I am up in the '70's and am the father of nine children, now scattered all over the United States."—J. W. Sweetwood, Soldiers' Home, Erie, Pa., Jan. 14.

"Looking for great things to come from America in connection with the great war to help us secure a great and lasting peace when the final blow has been struck against German brute force and barbarism."—S. T. Main, New South Wales, Australia, Dec. 1.

"Wherever the raspberry flourishes the honey bee will be found when it is in bloom. Seeing a thatch in blossom at my daughter's place suggested to me that here is a fine plant for waste places in all parts of the country."—Dr. A. F. Bonney, Buck Grove, Ia.

"There is a big opportunity for beekeeping in Montana, but some experimental work should be done to make somewhat more definite the information on wintering of bees and for some other purposes."—R. A. Cooley, State Entomologist, Bozeman, Mont., Jan. 25.

"Today we are having the first good rain for this season. Not in 16 years has the rainy season lagged so far behind. Good rains in February and March will make the outlook for bee men very promising."—G. W. Bercaw, Los Angeles Co., Calif., Jan. 26.

"I have extracted 30,000 pounds of honey since the first of November last during one of the coldest winters that the South has experienced in a long time. Have realized 13 cents per pound in barrels, F. O. B. Shreveport."—G. Frank Pease, Shreveport, La., Jan. 29.

"The Snake River Valley is experiencing an extremely mild winter, the result of which is that the bees are in fine shape. Last week the bees had a full flight. Made a trip around my yard and failed to find any

colonies that showed the least sign of suffering from confinement."—R. D. Bradshaw, Canyon Co., Idaho.

"It seems that all books on bees are written by Northern beekeepers, and some fellow down South said that a 10-frame hive was not big enough for us. Well, it seems he is right. My bees are ready to swarm by May 1."—J. Lloyd Sterling, Somerset Co., Md.

"Bees in bad shape down here, I am afraid. Poor flow last fall; could not buy sugar, and the coldest winter ever known. Zero again this forenoon; has once been 8 below. Only one flight since early December."—Parkin Scott, Hanover Co., Va., Feb. 6.

"There is no question in my mind that the spring of 1918 will find pound packages as well as whole colonies of bees higher. Therefore it behooves us to take the best possible care of our bees now and to build up wisely in the spring."—Lewis L. Winship, Erie Co., N. Y., Jan. 21.

"I found a large, tame silver gray bee working peacefully right under the roar of the cannon and am bringing two home. They may be the famous Hymettus bee; anyway, Mt. Olympus is plainly visible across the bay."—Francis Jager, American Red Cross, "Somewhere in Greece," Oct. 7, 1917.

"Today for the first time in eight weeks it is warm enough to look thru my bees and note conditions since early December. We have had continued cold weather. We have no trouble in getting all the sugar we want here at 8¼ cents. We are asked no questions."—S. A. Fuller, Phillips Co., Ark., Feb. 3.

"Luckily I always leave six full combs of honey above besides what they have below, and I think it pays big, for if the bees do not need it it can be extracted in the spring. It is unusual that at this time of the year there are no wild flowers in bloom or started growing in this section."—Francis J. Calahan, San Diego Co., Calif., Jan. 22.

"In December of 1882 and January of 1883 cattle and sheep were starving in the hills and pastures; and then February, March and April rains gave us a fair flow of nectar. Reports come in now of stock starving in the hills. Beekeepers need not worry over the rains holding off."—M. H. Mendleson, Ventura Co., Calif., Jan. 8.

"Held a meeting at Bradentown, Fla., where your father and I talked. Most of the things I advocated from the government standpoint, your father endorsed as what he had been preaching for 30 years. Wonderful opportunities at places in Florida, but much of it is poor bee country. I have never seen more apathy to better methods than most Florida bee men show."—Kennith Hawkins, Special Agent in Apiculture, to E. R. Root, Jan. 16.

THE beekeepers of Lawrence County, Pa., have effected an organization with the following officers: John Wilkinson, president; Chas. G. Linder, vice president; Louis Hawthorne, secretary-treasurer.



and St. Paul so as to promote competition among buyers in the purchase of these lots of honey. Serious effort is being made to form local and county beekeepers' societies thruout the Gopher State.

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The Pennsylvania State Beekeepers' Association will hold its annual meeting on March 15 and 16 at Lancaster. H. A. Surface, president, promises an excellent program.

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The 15th annual meeting of the Missouri Apicultural Society was held at Columbia, Mo., during Farmers' Week, Jan. 15 to 18. There was a full program for beekeepers prepared for each of the four days.

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The Broome County, N. Y., County Beekeepers' Association has been formed with the following officers: C. Willis Phelps of Binghamton, president; Earl H. Pratt of Triangle, vice president; Otto W. Gall of Binghamton, secretary-treasurer.

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At the annual meeting of the Colorado State Beekeepers' Association held at the Agricultural College at Fort Collins, Jan. 15-16, during the Colorado Farmers and Farm Women's Congress meeting, the following officers were elected: W. P. Collins of Boulder, president; J. N. Pease of Littleton, vice president; Wesley Foster of Boulder, secretary-treasurer.

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The Nebraska Beekeepers' Association is endeavoring to better its organization. At the January meeting held at Lincoln, the following officers were elected: S. J. Harris of Lincoln, president; Geo. O. Olson of Wahoo, vice president; O. E. Timm of Bennington, secretary-treasurer. A committee was also selected for the purpose of getting new members and creating new interest in the Association. It was decided to hold a meeting during the State Fair, when authorities on beekeeping will give instruction and a report from committees will be had.

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L. V. France, secretary of the Minnesota State Beekeepers' Association, states that arrangements have been made for each member of the Association to receive the United States Market News Bulletin on honey every two weeks from Washington. Arrangements have also been made so that members reporting to the secretary the honey they may have for sale, giving quality, amount and how prepared for shipment, will receive honey-price information, and the fact that they have honey for sale will be reported to several reliable honey buyers at Minneapolis

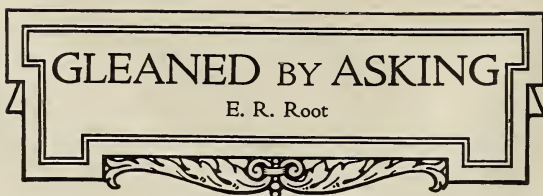
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Up to the time of going to press, Gleanings had not received the completed program for the annual meeting of the National Beekeepers' Association to be held at Burlington, Ia., Feb. 19 to 21. The president of the National, Francis Jager, has written that he expects that he will be leaving for Europe about the time of this meeting with the second Red Cross Mission from the United States to Serbia, and regrets that he cannot be present.

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The Panhandle Beekeepers' Association will hold the spring meeting at the Market Auditorium, Wheeling, Feb. 27. The West Virginia State Association will meet Feb. 28 at Wheeling. The speakers will be: Adam Y. Yahn of Triadelphia, who will demonstrate a Langstroth hive; T. K. Massie of Hatcher, president of the West Virginia State Beekeepers' Association, who will demonstrate the Massie hive; William A. Seaman of Wheeling, who will give a talk on sweet clover; and E. R. Root of Medina, who will address the meeting on a selected subject.

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The Ohio State Beekeepers' Association, at their convention held in Columbus in January, passed a resolution embodying the following request: That the Ohio Division of the Food Administration devise some means by which beekeepers of the State could secure sugar to the extent of one or two pounds per colony to feed; every pound of sugar so fed being likely to return 10 or 20 pounds of honey. The resolution stated that unless something was done at once thousands of colonies would starve and an important source of sugar supply would be cut off.

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The report of "Honey Production in British Columbia for the Season of 1917," by F. Dundas Todd, foul-brood inspector, states that the average per hive was 51 pounds, of excellent quality, and that this product sold readily at 20c a pound wholesale and 25c retail. The report states that British Columbia lost half her bees in the winters of 1915 and 1916, and strongly urges better winter protection thruout the province. The total crop of the province is estimated to be about 168 tons. The report indicates that there is plenty of room for many more beekeepers in British Columbia and that her beekeepers should average a larger amount of colonies each than at present.

**Q**UESTION. — I expect to buy about 24 colonies of hybrid bees on more or less crooked frames in movable frame hives, transfer into new hives and frames and requeen with pure Italian queens at the time of transferring. Kindly tell me how I may do this and also save the brood that is in the old hives. F. C. Wilson.  
Wyoming.



**Answer.**—The manner of transferring will depend entirely upon how badly the combs are criss-crossed in the old hive. If one is able to remove such frames, he may place on the old stand a new hive with an entrance guard and a frame of young larvæ. The latter should be placed in the center of the hive, and the remainder of the hive filled with frames of drawn combs, containing some honey, altho frames of foundation might be used if one intends to feed. The cage containing the queen to be introduced is placed over the frames of brood, or between two frames of honey. The frames from the old hive are then shaken in front of the new one, and the bees allowed to run in thru the entrance guard. The queen, not being able to get thru the guard, will be found in front of the hive, probably right in front of the entrance, vainly attempting to get thru. She should be captured and killed, and the entrance guard removed. The combs of brood are then placed above the new hive with a queen-excluding honey-board intervening. At the end of three weeks, the worker brood from the old hive will be hatched, and the comb may then be melted. Should it happen that the combs are very badly built, so that it is impossible to remove the frames, the best plan is to place the old hive of brood above the new hive, which should contain a frame of larvæ and some honey, then vigorously smoke the colony until the queen and most of the bees go below, when a queen-excluder may be placed between. After the bees are quieted, perhaps the next day, the queen may be found and killed, and the new queen introduced, according to the directions on the shipping cage. Three weeks later the old combs may be removed and rendered. If the weather is so cool that there is danger of chilling the brood, the above arrangement is very satisfactory, but during a heavy honey flow, one would hardly care to have a great quantity of honey stored in this old set of combs. In that case, it would be better to reverse the order and place the new hive above.

**Question.**—Will sorghum cane molasses be all right to feed for stimulative brood-rearing? If so, should it be diluted with water? Would it be better to mix half molasses, half extracted honey and dilute with water? J. K. Sledman.  
Tennessee.

**Answer.**—As soon as the bees are able to fly several times a week, it will be safe to feed sorghum cane molasses. For stimula-

tive brood rearing, it should be diluted with from 5 per cent to 10 per cent of water. Mixing it with honey is a good plan. We believe the proportions of 1/3

honey, 1/3 molasses and 1/3 water, would be about right. Converting sorghum molasses into bees will surely be worth while the coming season.

**Question.**—Will bees build up in the spring if fed diluted maple syrup? If so, about how much should it be diluted? Would the skimmings, taken off while cleansing the syrup, be just as good?

Ohio.

Earl C. Brockway.

**Answer.**—Maple syrup diluted with not more than 10 per cent of water would be fine for spring feeding. The skimmings, altho not as good, may also be safely fed.

**Question.**—In recent numbers of Gleanings is mentioned a plan of wintering by standing the frames on end. Now, at the time of unpacking, there is quite a lot of larvæ, all of them in their proper positions. Might it not hurt them to change their position by placing them on their sides?

Ohio.

Houston Scott.

**Answer.**—No. When transferring or patching old combs, the larvæ are often placed in any position that chances to be most convenient. Whether they rest on their backs, fronts or sides seems to be quite immaterial.

**Question.**—The last of January, it was very warm here and so we looked thru some of the colonies we thought might need stores, and in half of them we found brood. There was brood in all stages, some colonies having as many as three combs with patches of brood three inches in diameter. These colonies have not been disturbed before this winter and therefore we cannot understand the cause of this early brood rearing. Usually our spring doesn't begin until the last of March.

Kansas.

Weber Bros.

**Answer.**—Even in northern states, brood rearing may start as early as January, if the bees are disturbed in any way, or if a few warm days occur. Such untimely breeding is apt to result in the loss of the colony, for the undue activity necessary for keeping up the temperature of the brood causes quantities of stores to be eaten, and if the weather turns too cool for a cleansing flight, dysentery and death are likely to result.

**Question.**—In regard to the Demuth plan of wintering, is there not an objection to standing the frames on end? I have Danzenbaker hives and when I inverted the frames, the honey ran out. Don't the bees build the cells slanting downward? And wouldn't this cause the honey to leak if the frames were stood on end?

Ohio.

Will Sharpe.

**Answer.**—One of the first advantages claimed for the Danzenbaker hive was the possibility of inverting the frames. Altho there is a slight slant to the cells, the honey should not run out when frames are stood on end. If honey runs down the sides of the frames, it has not been properly ripened and

is much too thin for winter stores. However, your bees may survive the winter in spite of this fact. It will be a good plan to occasionally poke out the dead bees that accumulate at the entrance. In doing this, pains should be taken not to jar or disturb the bees.

Question.—If sown on abandoned fertilized wheat ground in April, would white sweet clover seed produce a hay crop the first season?

Ohio. Chas. H. Cargo.

Answer.—White sweet clover may be depended upon to give a good hay crop the first year. Sometimes it is even tall enough to be cut in July, but since the crown sprouts have not started at that time, it should not be mowed close to the ground, as most of it would be killed outright.

Questions.—Will it do any harm to keep my bees in the cellar after those outdoors have had a flight? (2) Would the more or less noise from the family overhead interfere with their wintering in good condition?

Ontario. J. N. Smith.

Answers.—(1) Even if those cellar-wintered colonies are cheated of one or two flights, it should cause no worry as long as they are wintering contentedly. At the opening of the first spring bloom the bees should be moved out providing the days are warm enough to permit several hours flight each day. (2) In Medina, we have successfully wintered bees under a machine shop where there was constant noise and vibration.

Questions.—Would it be advisable to make up the sections now and put in starters? What width would you put in, full sheets or one inch?

Ohio. Robert Herrick.

Answer.—We prefer making the sections and putting in foundation a few weeks before they will be needed. The foundation usually is in better condition, and the sections not as apt to break. Still, many good beekeepers put up their sections several months before using and consider it makes but little difference. By all means use the full sheets, and we venture to say that you will never again be satisfied with mere strips.

Questions.—(1) I have nine colonies of cross bees which I wish to put into new hives. If I re-queen with Italian stock at the time of transferring, will I get pure Italian bees? (2) Would it be all right to make the change about the middle of April and then feed them sugar syrup until fruit bloom? (3) Also would it be safe to extract the honey from the old frames, and, after boiling, feed it back to them? (4) Did you ever try introducing a new queen by putting her in a cup of honey and pouring her down between the frames, and what kind of success did you have, if you did try it?

Pennsylvania. Buel Buddinger.

Answers.—(1) Yes, if you introduce a tested Italian. (2) Giving a colony foundation early in the spring is a pretty cold arrangement. It would be better to wait until fruit bloom, especially if the spring happens to be a cool one. If put on foundation before any honey is coming in, they will, of course,

need to be fed. (3) Honey may be diluted, boiled 30 minutes in a closed vessel and then fed to the bees. But it is safer to re-boil it just before feeding. (4) Yes, we have introduced queens successfully by daubing with honey. There is no particular objection to the plan if one cares to give a nice queen such a treatment. We don't like this method of introducing, perhaps for no other reason than that it makes the queen both look

Question.—My hives of bees were all upset during cold weather and I am afraid I shall lose most of them. In that case I shall have to fall back on pound packages next spring. What must I do, if I want a honey crop in 1918?

Maryland. Philip Barret.

Answer.—If you are desirous of a good honey crop the coming season, our advice is to order queens, bees and supplies as soon as possible. Realizing the necessary delays that will occur the coming season, many are even now filing their orders, and we believe it is none too soon for those who intend securing that bumper crop we hope for. The best plan is to buy colonies from your own locality. If this is impossible, it might be well for you to buy two- or three-pound package with queens. These you can build up by stimulative feeding and by giving frames of brood from other colonies.

Questions.—(1) When should the packing be taken off in the spring? (2) How late can the bees be safely moved a short distance in the spring?

Illinois. O. E. Killgrove.

Answers.—(1) The packing should be kept on until settled warm weather, so there will be no danger of chilling the brood; the exact time will depend upon the season. Of course, it should not be kept on so long as to be in the way. Sometimes it may be necessary to keep it on till the last part of May. (2) If one wishes to move bees a short distance in the early spring, he should do so carefully and without jarring. In order that the bees may not return to the old location and be lost, one should make the removal during settled cold weather so that two or three months will elapse before the bees have a chance to fly.

Question.—My small colony of bees has already succumbed, leaving in the hive a small handful of dead bees and about one pound of sealed honey. As they were well protected, I cannot understand the cause of their death.

North Carolina. C. G. Rogers.

Answer.—This is such an unusually hard winter that we are continually receiving just such reports as yours. Besides the good packing one should also consider the size of the colony, the nature and location of wind-breaks, and the quality as well as quantity of winter stores. Many bees will perish this winter from dysentery, caused by unripened stores, the small size of the colony, or insufficient protection. Others will starve with plenty of good stores in the hives, simply because the bees are too cold to move over a few inches to the stores. In the case of your

bees, we rather suspect they died of dysentery. They doubtless took a cleansing flight during unsuitable weather and thus died outside. This would account for the small number of dead bees in the hive.

Questions.—(1) People always advise keeping bees and chickens with fruit. Now in spraying fruit trees with arsenate of lead, will not the honey be poisoned and kill the bees and any person eating it? (2) And will not the spray falling on the grass also kill the chickens? Charles Goller.  
Canada.

Answers.—(1) Spraying should be done before the blossoms open, and again after the petals fall. To spray during fruit bloom has been proved quite injurious to the pollen and reproductive organs of the blossoms as well as to the bees. The queens and brood are most quickly affected, altho whole colonies of bees are sometimes killed by the poison. (2) We have no record of any person having been poisoned by such honey and it seems probable that honey containing a sufficient amount of poison to affect a person, would kill the bees before they had a chance to store any surplus. Of course chickens would be poisoned by the arsenate of lead on the grass if they ate it, but we have never taken any special precautions in this respect and yet to our knowledge have never had any chickens thus injured. It is our opinion from some observation that chickens will not eat grass that has a deposit of arsenate of lead on it. There is always enough other grass beyond the reach of the sprayer that the chickens can get.

Question.—This winter I have been troubled with slush freezing at the entrance. Several times I have scraped it away just in time. How could one with a large apiary avoid losing bees from this cause? Vermont.  
R. L. Palmer.

Answer.—Hives should slope a little toward the front, so there will be no chance for water to stand in the hives. If there is sufficient upward ventilation, we would have no fear of the slush freezing over the entrance. In the first place, if the colony is strong, enough warmth usually escapes thru the entrance so that it is not closed with slush. When good colonies are buried in snow, there is nearly always a melted space in the snow just in front of the entrance and extending up the front of the hive. In those cases, in which the entrances are closed with ice, good upward ventilation leaves the bees in a perfectly safe condition. If non-porous covers are used, it will be necessary to keep the ice cleared from the entrances in order to avoid smothering the bees. To prevent ice from thus collecting, there should be no ledge under the entrance, for in a winter like the present, the ice may gradually pile up until the entrance is completely shut off. If there is an alighting board, it should be shoved back so far that there is no projection in front of the hive. Straight down from the entrance there should be a sheer drop of at least two or three inches.

Questions.—The combs the bees have in the cellar are moldy. Will this do any harm? And can I

use the combs in spring? (2) When bees need pollen and are unable to get it in the spring, what should they be fed? (3) Would it be all right here in Wisconsin, to set my bees out in March and put on winter cases? Frank Beran.  
Wisconsin.

Answers.—(1) We would much prefer that the bees should not have moldy combs, and if the case is very bad, we would replace the combs; but ordinarily removing the cause will be all that is necessary. Evidently the stores were unripened, the cellar too damp, or the hives or cellar not sufficiently ventilated. Such combs may be used in the spring with no danger whatever. They will be cleaned in a short time if they are distributed to various brood chambers or placed under strong colonies. (2) Different flours and meals have been used for this purpose. Equal parts of rye and oats make a very good artificial pollen. Ordinarily such feeding is unnecessary and often a real detriment and should not be resorted to except when the bees are in actual need and refusing to be satisfied with water, continue their vain search for a pollen substitute. (3) Yes, if desired. However, many prefer to wait until settled warm weather and then use no winter cases. The condition of the bees should be the determining factor. As long as they are quiet and contented, nothing is gained by moving them from the cellar before the coming of the first pollen. We usually set ours out at the opening of maple bloom.

#### ANSWERS BY C. C. MILLER.

Questions.—(1) Will it be all right to get one pound packages of bees with a queen in each and put them in a 10-frame hive with one frame of sealed brood and the remaining frames with full sheets of foundation? How would it do to get one-pound packages without queens, put them in the same kind of hive, with one frame of eggs from another colony? I would like to do this the last week in April. (2) What do you think about a 20-frame brood chamber? I understand they use them successfully in Iowa. Illinois.  
Edw. J. Steinberg.

Answers.—(1) The first plan you mention is many times better than the second. Your pound of queenless bees in April would hardly be likely to rear a queen worth having. A good queen should have her start in a strong colony at a time when there is a strong honey-flow. It would likely be three weeks before the young queen would lay, and three weeks more before her progeny would begin to emerge, and during that six weeks most of the original pound would have passed in their checks. With a laying queen at the start there would be a different story. (2) The big brood-chamber with 20 frames, more or less, has been successfully used in this country under the name of the "long-idea hive," and is used much more in Europe. I don't think there is any special trouble in using it, but for one reason or another most beekeepers in this country would rather have the surplus department in a separate and higher story instead of in the same story with the brood.

C. C. Miller.

## TALKS TO BEGINNERS

By the Editor

FOR the especial benefit of those persons who for the first time are turning their attention to bee-keeping, we intend, during the ensuing months, to publish a series of talks on the production of extracted honey. Each article will state concisely and clearly what, to us, seems the one most reasonable and best plan of manipulation for that particular month, in northern temperate latitudes. It is hoped that these few articles may add thousands of pounds to the world's sweets, for during the present sugar shortage, many people, knowing nothing about bees and yet having a few extra hours each week, will be glad to do their bit by purchasing at least two or three colonies and launching in the bee business.

We shall take up the subject of extracted honey rather than comb honey because its production requires far less skill and results in more money and a larger crop. The large combs being more in accordance with nature, than the small section boxes, the bees seem to greatly prefer working in them. Some seasons are quite unsuitable for comb honey production, since a short, heavy flow is necessary for best results. Moreover, very large colonies and limited super room are required to keep the super warm enough for the wax building necessary in comb-honey production, most of which building takes place at night. Now, large colonies and lack of room inside the hive are two of the main inducements to swarming. And, if allowed to divide (or swarm), neither of the two resulting colonies would be large enough to produce comb honey. Therefore, in order to prevent swarming the comb-honey producer is obliged to give his bees the very closest attention possible. It is evident that this requires the care of the specialist and not the beginner.

To those people who thoroly enjoy nature, who have the habit of close observation and an aptness for applying such knowledge as occasion arises; to those who are careful, orderly and not afraid of work, or of soiled hands or of an occasional sting,—to such we are ready to guarantee a decided success in the bee business.

Bees can be made to pay for themselves almost from the start, and for the additional apparatus needed in increasing the apiary, as well as show some profit besides. Of course, without having a fore knowledge of weather conditions, for the coming season, we can give no definite figures on the probable crop, but we should expect a colony to average anywhere from \$8.00 in a poor season to \$20 or more in a good one, at present honey prices.

An orchard is a fine place to keep bees, but since they fly for a distance of 2 to 5

miles or further, there is hardly a spot in the whole United States where bees cannot get some honey. For a suitable location, therefore, the small bee-

keeper need look no further than his own back yard, or lacking this, he may keep them even on the roof or in the attic.

Those just starting will find it a great pleasure and help, tho not a necessity, to read one or more of the beginners' books now on the market and also to subscribe for one of the leading bee journals. A large fund of necessary information may also be obtained from a study of the supply catalogs, which may be obtained for the asking from any of the beekeepers' supply houses, several of which are advertised in this journal. We know of a beginner who said he learned more about hives, tools and beekeepers' apparatus in general from a supply catalog than he was ever able to learn in any other way. In addition to this preliminary learning, it would be a great help to have a few heart-to-heart talks with a real "sure nuff" beekeeper who may live near.

To those contemplating this start in bees, we recommend that the needed supplies be ordered immediately, to avoid delays that are bound to occur later in the season. In order to assist the beginner in making a wise choice of supplies, we shall suggest a suitable outfit for the production of extracted honey. The real essentials are: One 10-frame hive-body, with wired frames containing sheets of comb foundation; two or three 10-frame supers just like the hive body; one floor-board; one inner cover; one outer cover; one bee-brush; one bee veil; one bee smoker; one queen excluder, and one hive tool. It will be noticed that this essential outfit just given includes only one complete hive with its two or three supers of frames. For a model outfit we would suggest an extra hive for a possible new swarm, with two extra supers, one two-frame honey extractor, and one uncapping knife. The reason we omitted the two latter from the essential outfit is because the honey need not be extracted at all, but simply used as chunk honey, or if one prefers extracted honey, there is in nearly every locality some large beekeeper who will be glad to do his neighbor's extracting for one cent per pound. It is evident that no small beekeeper could do it as cheaply as this with his apparatus. Still there is a pleasure and satisfaction in attending to the whole process one's self.

Next month, assuming the beginner's supplies to have been ordered and already on their way, our talk will contain a description of these same supplies and their uses, as well as a careful look-in to this same hive as it is to appear a little later when the bees have taken possession.

At our usual Wednesday-evening prayer-meeting, our leader, Rev. Dr. Hallock, gave out cards to be answered, and the one handed me read as follows:

"Do you expect that the whole world will some day know and love Jesus Christ? Why?"

On account of my impaired hearing I have for years been in the habit of getting as close to the speaker in any meeting as I can; and therefore when it came my turn to reply to my card I rose up, turned around, and spoke to the good people gathered there as follows:

My good friends, some of you may smile when I say, first and foremost, I expect "the whole world will some day know and love Jesus Christ," because the Bible says it will, and I refer you to our first text at the head of this talk.

Secondly, I believe the whole wide world will ultimately be converted to Christianity, because just now a thousand evidences point toward such a culmination.

Since the world began, the liquor traffic has been the greatest obstacle to the spread of the gospel; and just now, for the first time, it seems to be "losing its grip" on our business and politics—a grip that it has maintained for ages, in almost undisputed sway. In fact, for almost seventy years of my life I have seen it "jeer" at "temperance fanatics," as it was pleased to call us, and say by action, if not words, "Help yourself if you can." Well, almost as I speak (may God be praised!) our Government, both House and Senate, have come out with a large majority for nation-wide prohibition. All that is needed now is for three-quarters of the states to endorse this action. Twenty-seven states are already dry, and Ohio has already "rolled up her sleeves" to go into the fight to make beloved Ohio the first of the nine now needed to complete the victory. God grant that Florida (also "beloved") may be second in the list.

Just here my good neighbor Rood (superintendent of our big Sunday-school)

## OUR HOMES

### A. I. ROOT

Wherefore God also hath highly exalted him, and given him a name which is above every name; that at the name of Jesus every knee should bow, of things in heaven, and things on earth, and things under the earth; and that every tongue should confess that Jesus Christ is Lord, to the glory of God the Father.—PHIL. 2:9, 11.

He brought me up also out of an horrible pit, out of the miry clay; and he set my feet upon a rock, and established my goings. And he hath put a new song in my mouth, even praise unto our God: Many shall see it, and fear, and shall trust in the Lord.—PSALM 40:2, 3.

goes, so goes the "whole wide world." My friends, does it not just now begin to occur to you that this terrible war is on the way toward a "new heaven" and possibly "a new earth," in many respects?

Before leaving the subject of temperance, let me quote from one of the greatest dailies of our land. *The Toledo Blade* was, years ago, one of the first city dailies to come out squarely for prohibition, and it has ever since been pouring "hot shot" into the ranks of the enemy. Here is one of their latest:

"The greatest saving now when most needed would be made by stopping entirely the shipping of beer and also the returning of barrels, kegs, and cases of bottles, which take as much freight as the original shipment. The railroads formerly carried these returns free.

"You will see side tracks filled with cars loaded with coal while people are suffering for the want of coal, and factories shut down, throwing employes out of work because of the lack of coal, but you will see train loads of beer going by on schedule time.

"Even with the 25 per cent reduction in the amount of alcohol there will be wasted in manufacture of beer 54,000,000 bushels of grain a year, and the weight of water in the beer and the kegs and bottles multiplies this by eight, so you have on a transportation basis the weight of more than 432,000,000 bushels of grain used up for beer shipment alone, or 1,080,000 carload lots a year—enough to relieve the railroad congestion of the United States for all time."

No matter if the schools are closed, the factories shut down, and people contracting tuberculosis because of cold, beer must have the "right of way" before everything else! How long will Ohio stand this? How long will the world stand this? Perhaps it will have been stopped before you see this in print. God grant it may be so. Just now our physicians are reporting that the terrible (and almost incurable) disease syphi-

interrupted me by saying, "Why not have Florida first and Ohio second?"

Of course I said "amen;" but I admonished Florida to hurry up if she didn't want to "get left." It has often been said of late, that, as Ohio goes so goes the whole United States; just now it might almost be said, as the United States

lis is contracted in the majority of cases by men who were (or *when* they were) *drunk*. Does it seem possible a man in his right senses would deliberately curse his wife—yes, even his *unborn children*, unless he were out of his head? But strong drink is not all of it. Great progress toward righteousness has been made in other ways in the past seventy years. When I was a boy there was no Y. M. C. A. (At least I had not heard of it.) There was no Endeavor society nor Salvation Army. I have seen them both start and grow. There were no young people's prayer meetings, no gospel songs. Why, before God sent out Moody and Sankey to us the popular songs were negro melodies, senseless or worse—some of them. Shall I give you two lines as a sample?

When I goes out to promenade, I looks so fine and gay,  
I has to take de dogs along to keep de girls away.

When the Gospel hymns were started, they took like wildfire, for even the children saw and appreciated the difference. I told you in a Home paper a few months ago about the worldwide work of the Y. M. C. A. This same war has spread that and the Red Cross all over the world as nothing else could have done.

Now a word about our second text or texts. It was announced a week ahead that the topic of this especial prayer-meeting would be, "What has Jesus done for *you in your life?*" In answer I selected the two verses from the 40th Psalm. Perhaps I should explain that, during a brief part of my early life (thank God it *was* brief), I was attracted by (at that time) popular skeptics, agnostics, etc. After I left that crowd I one day had a talk with a young man of much ability who had been flattered because he spoke and even wrote some very plausible things against the Bible. I finally induced him to go "just once" to our prayer-meeting. After several fine testimonies from young converts I was a good deal worried when *he* arose to speak. He apologized, saying he was very likely out of place, as he was not prepared just then even to accept Christianity; but that there was one "testimony" he could honestly give, and that was that "skepticism and infidelity are the most unsatisfactory things the world has ever produced." I found it so, and it was at this time the dear Saviour found *me* and "brought me up out of a horrible pit, out of the miry clay," \* set

\*Some of you may be inclined to think I exaggerate about being in "a horrible pit" and "in the miry clay;" but Mrs. Root could, if she would, assure you there is no fiction about it, for *she* will remember it to the last day of her life.

my feet upon a rock and established my going." Yes, praise the Lord, "he put a new song in my mouth" in place of the old "doggerels." Shall we not all join, not only in *singing* but *helping* to bring about "the whole wide world for Jesus?"

#### BEE CULTURE AND SOME OF ITS KINDRED INDUSTRIES IN FLORIDA.

The following is clipped from the Florida Grower for Nov. 10, 1917.

My good friend, the editor of the *Florida Grower*, has asked me to write something about bee culture in Florida. Perhaps in beginning I might speak of the kindred industry of poultry-keeping. Years ago I overheard a young kid say to the proprietor of a general store something like this:

"Mr. T., if you did not have to pay any money for the goods you keep in your store, wouldn't storekeeping be just fun?"

The storekeeper grinned; I do not quite remember what answer he gave the urchin; but I have often thought of it since, especially since the "high cost of—chicken feed."

At my winter home in Bradentown I have of late done more with chickens than with bees, and I suppose there are a lot of people who just now are thinking it would be rare fun to keep a lot of chickens if it did not take so much "good money" to buy the feed. When I spent my winters on the island of Osprey there was one man on the island who kept something like a dozen chickens, and he never fed them anything—did nothing but just gather the eggs. The small number of chickens went over to the Gulf Beach after animal food, then rambled over the island for what else they needed to make up a "balanced ration." Year after year, winter and summer, he did nothing but gather the eggs; but, of course, he did not keep very many fowls. Where the number kept is just sufficient to supply a family with eggs, and they are fed from the scraps from the table, such people know very little about the expense of keeping laying hens by the hundreds or thousands. You may suggest that the poultryman may grow his own grain, even down in Florida; but this does not make it very much better, for I saw a statement in one of the poultry journals quite recently to the effect that the grain they had been feeding to their chickens would have brought more money on the market than the eggs and chickens that had been sold. In an interview with a poultryman of our Ohio Experiment Station he said I was entirely right, and that unless grain came down or eggs went up it would be almost an impossibility to get out whole, and the person who undertakes to keep poultry by the hundreds and hire help to care for them will be almost sure to sink money.

Now, if you choose, let us take up bee culture.

Bees, if prudently managed, almost fill the bill as presented by that youngster to the storekeeper. You do not have to buy grain, and you really do not have to buy feed of any sort. Of course, if a bad season should occur, and you have not kept reserve "slabs" of honey in the shape of capped and sealed frames of comb, you may have to buy sugar, and that, too, is away up. We have in Medina at present writing a large number of colonies, and more honey on the first day of September than they will in all probability need for the winter. Some of the younger members of our firm were talking about extracting honey and selling it, because the price of honey is also away up, and then buying sugar to feed if feeding should happen to be needed.

I said, "No, no, boys! Save what honey there is

right in the comb for any possible emergency, for there is no easier, quicker, and safer way of feeding bees that are short of stores than to give them sealed stores of honey."

I think the boys did not do any extracting.

Langstroth lays strong emphasis on such advice in his book published over fifty years ago. Combs of sealed honey are the "sheet-anchor" of successful beekeeping. They are like money in the bank, or even better. They can be given to a colony short of stores very easily. There is no robbing, and no unseasonable disturbance such as liquid feeding causes. Another thing, those new in beekeeping and who have not experimented as I have in years past, will find it difficult to say how many pounds of liquid feed, honey, or sugar syrup, must be fed to get the same number of pounds sealed up in the combs.

Our President and his cabinet have, as you probably all know, urged beekeeping just now in order that honey may take the place of sugar more largely. "Gather up the fragments that nothing be lost" seems to be the slogan as I write.

Well, now, there are tons and tons of honey going to waste all over Florida because of the lack of bees to gather it; and after you once get a start there is nothing to be bought in the shape of high-priced grain or any other feed. The day of patent hives has gone by. All you need to buy is cheap, simple hives and give the bees a home. Of course the amount of honey you get will depend a good deal on the season and the locality; but, my dear friend, it depends ever so much more on the man or woman who is the owner of the bees. In the height of my enthusiasm, when I was deep in the studies of the possibilities of bee culture, years ago, I secured a barrel of honey from a single colony of bees in just one summer, but to do it I bent every energy and left no stone unturned to have everything just right. Of course there was a tremendous flow of honey that lasted a long while, during that summer of 1868. One single colony, mind you, did this. When I reported in our county paper what I had done, an old man who had about a hundred colonies in box hives said it was an impossibility—that I deliberately falsified or else I had gone crazy. When I took the old gentleman by the arm, however, and led him to my apiary and showed him a colony of bees suspended on a spring scale with a dial like those you have seen in the meat market, he was obliged to own up and apologize. I made him sit down by the hive and watch the pointer of the scale, with watch in hand, to see how many pounds they would probably bring in in a day. If I remember correctly, over on the East Coast, Florida, before the great freeze of years ago, a good-sized apiary once averaged almost, if not quite, a barrel of honey to the hive. Now while we sing

"Praise God, from whom all blessings flow,"

shall we not bestir ourselves and be ready to take as a free gift this blessing in the shape of beautiful, pure, wholesome honey that takes only a little of our time and attention to secure, without any regard to the high cost of grain and ever so many other things? Can you imagine, my good friend, any shorter cut between "producer and consumer" than taking the honey from your own hives?

A. I. ROOT.

#### GOATS AND GOATS' MILK FROM FAR-AWAY NEW ZEALAND.

Dear Mr. Root:—I have been greatly interested in your articles about goats and their value. Ten years ago my wife was suffering with chest trouble when the doctor who was attending her strongly advised me to procure a milch goat and give my wife the milk because, as he said, it was the finest and best milk she could get, and there was

no chance of tubercular germs in the same. I took the advice and bought a goat for which I paid, as you would say, about 10 dollars. As is well known, any one suffering from tubercular troubles is very touchy about what he drinks or eats; but in the case of my wife she had nothing but praise for the taste and quality of the nanny milk. Since that time until the present I have never failed to sing the praise of goats' to all my friends and advise them to buy one if possible.

I have now a good milch goat, two young ones, a doe and a buck, and also a pure-bred Angora, which is a beauty. The nanny after bringing up two young kids until they were over three months old, now keeps me supplied with splendid milk. Of course, living by myself, a great deal of milk is not needed; but for all that I have plenty; and when my little girl comes each week-end from her aunt's to make a visit with me she dearly loves porridge for breakfast with goats' milk and honey—two of the finest things to be found anywhere.

A friend was visiting me the other evening just as I was milking my nanny. When I had finished I offered him a drink of milk; but he said that he did not want one; but as I would not take no for an answer he just took a sip at first, then a little more, which was followed by a real good drink, after which this remark was uttered: "By Jove! that is splendid. I never thought goats' milk was so nice."

Mr. Root, I always read your articles with pleasure, and not the least of them are the ones about our friends the goats. Keep it going, because the work is good.

S. RINALDI,

Kaiapor, Canterbury, New Zealand.

#### POTATOES FROM SPROUTS—SOMETHING MORE ABOUT IT.

Our good friend Chalon Fowls, of Oberlin, Ohio, clipped the following from their local paper and sends it to us:

Altho being laughed at by a number of her neighbors last spring, an Oberlin lady raised a peck of fine potatoes from sprouts. During the spring her last potatoes were sprouted and she broke them off and threw them away. Later she thought she would plant them and put two sprouts in a hill, first puddling the soil. She had twenty hills; and, altho the neighbors used to lean over the fence and tell her she would have some choice green vines but no tubers below, she said nothing, but hoed her rows and chased the friendly potato-bug. No particle of potato was attached to the sprouts when planted. The harvest produced as fine mealy tubers as ever grew; and, altho not so large as many, they were well worth while. The lady says the value of the potatoes does not compare with the real joy she is having in telling her neighbors how to garden.

Today, Jan. 10, our garden is picking up finely under the influence of a warm summer shower. Three or four rows of beans, a little corn, and some egg plants are all that have entirely "gone dead." The Chayote is starting up again from the root, in fine shape.

#### SOME KIND WORDS FROM A HOME MISSIONARY.

I find a chance to pass your magazine on from time to time to others who are interested in bees, and hope to do good in more ways than one. May God continue to bless you in your work, which in the bee line is clean, honest, and upright; and I am sure your work for the Master has been abundantly blessed, for he never forgets.

Combs, Ark.

REV. J. E. JETER

FLOUR IS HIGH

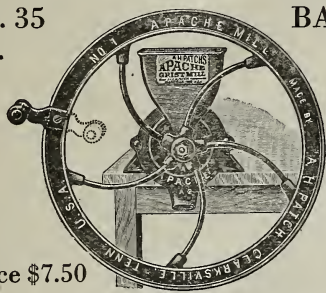
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Grind your wheat into Best Whole Wheat or Graham Flour. Your doctor knows how healthy these are. Make the BEST Corn Meal, the old-fashioned sort you can't buy at any price nowadays.  
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J. B. MASON, Manager.

Our Food Page—Continued from page 156.

At noon pour the boiling potato water over the rolled oats and salt and add the honey. When lukewarm add the yeast and beat well. Add a little flour if necessary to make a batter as stiff as cake batter. Cover and keep in a temperature of about 70 degrees until evening. At night stir in enough flour, half whole wheat and half white, to make a rather stiff dough. Knead well and cover closely. If the room is liable to become cold thru the night it is well to cover the bread raiser with a blanket. In the morning divide into two loaves and let rise again. When light brush with melted fat and bake.

RYE BREAD.

- 2 tablespoons flour ½ cake dry yeast soak
- 2 teaspoons salt ed in
- 1 tablespoon honey ½ cup warm water
- 2½ cups boiling potato 3 cups white flour
- water Rye flour
- 2 potatoes mashed

At noon pour the boiling potato water over the two tablespoons flour, the honey and the salt. Add the mashed potatoes and when lukewarm the yeast. Stir in enough white flour to make a batter, about three cups, and then proceed as in the recipe for oatmeal bread, using rye flour to make the dough at night.

In either of the above recipes, if preferred, the sponge may be made at night and the bread made into a dough in the morning.

WHOLE WHEAT MUFFINS.

- 1 egg 1 teaspoon baking powder
- 2 cups sour milk der
- 1 cup white flour 1 tablespoon melted
- 1½ cups whole wheat ½ shortening
- flour ½ teaspoon salt
- 1 teaspoon soda

Beat the egg well, add the sour milk and then the flour in which the dry ingredients have been sifted. Add the melted shortening and bake in muffin pans about thirty minutes. —Continued on next page.

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Our Food Page—Continued from page 185.

### CEREAL MUFFINS.

- |                           |                         |
|---------------------------|-------------------------|
| 1 cup white flour         | 1 cup cooked oatmeal    |
| ½ cup whole wheat flour   | 1 egg                   |
| 4 teaspoons baking powder | ½ cup milk              |
|                           | 1 tablespoon shortening |
|                           | ½ teaspoon salt         |

Add the beaten egg and the melted fat to the cooked oatmeal. Beat thoroly and add the milk. Then add the dry ingredients in which have been sifted the baking powder and salt and again beat well. Bake in oiled muffin pans about thirty minutes. As the amount of moisture in the oatmeal may vary you may need more or less flour.

### CONSERVATION CRACKERS TO ACCOMPANY SOUP OR SALAD.

- |                          |                    |
|--------------------------|--------------------|
| ½ cup cornmeal           | 1 teaspoon salt    |
| ½ cup wheat flour        | 3 tablespoons milk |
| 2 tablespoons shortening | Grated cheese      |

Sift flour, meal and salt and cut the fat in with two knives. Add enough milk to make a dough, roll out very thin, cut out and bake in a quick oven until golden brown. Sprinkle a little grated cheese over the top and put back into the oven until the cheese melts.

### BAKED HONEY CUSTARD.

- |                     |                               |
|---------------------|-------------------------------|
| 1/3 cup honey       | ½ teaspoon nutmeg or cinnamon |
| 3 eggs              |                               |
| 2 cups scalded milk | ¼ teaspoon salt               |

Beat the eggs slightly, add the honey and then the spice and salt. Pour the hot milk over slowly, stirring constantly. Bake in cups in a pan of water.

### HONEY PICKLE FOR HAM. (Rural New Yorker.)

- |                      |                 |
|----------------------|-----------------|
| 4 pounds coarse salt | 2 pounds honey  |
| 1 ounce saltpetre    | 2 gallons water |

Let the brine stand for 24 hours, then immerse the meat in it and let it stay in pickle six weeks. This is said to be a favorite recipe in France.

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## AROUND THE OFFICE M.A.O.

I don't associate much more at all any more with A. I. Root, so I don't. I ain't sayin' he ain't a good man either. Just so, he don't seem to be hangin' around hankerin' after my company much, and I hain't calulated any of the time to let him into this department, neither. But if he's goin' to tell fish stories in Gleanin's, he's got to be recognized in this department, I suppose, whether I like it or not. Then again, I associate with about anybody when it comes to fish and fishin' and fish stories and I don't see but that the fish story "Uncle Amos" has sent ain't pretty near up to standard. It's as big a one as my fishin' friend, Ab. Lutz, has ever told, and he's been practicin' 50 years or more with some of the best of 'em. Ab. and none of his fishin' friends, so far as I am knowin' to it, ever alleged goin' fishin' with a rake and wheelbarrow, or meetin' all the inhabitants of their town to oncet, sufferin' and swoomin', collective and severally, under the weight of fish so big they couldn't find room for them onto their backs. So, I guess Ab and me and the rest of our fishin' crowd ain't so superior to A. I. Root that we need feel he is lowerin' the tone of this department if we let him into it long enough to tell a fish story. So here is just verbatum what he sent home, expectin' evidently it would get past M.A.O. into his own high-toned department:

A few days ago when I arrived in the suburbs of Bradentown, I passed two girls (nearly full grown women) carrying a pole, a girl at each end. On the pole fish were strung, with the tails dragging on the ground. Said fish were so heavy the girls stopped every few rods to rest. Another girl about as large had a single fish tied over her back, the head coming up near her head, while the tail to this fish also came near (if it did not quite touch) the ground as she walked. A little farther I saw a wheelbarrow full of fish, some of them with their heads over the front end, while their tails dragged on the ground. The explanation of the above is that the frosts and freezes that played such havoc with our gardens made the fish stupid so they floated on top of the salt water, where they could easily be "raked" in. After I got home, I started "Wesley" with the garden rake and a pail down to the canal at the lower end of our garden. He soon returned with quite a lot about as big as your hand. It was a case of "the early bird" again. Somebody had gone ahead of him and got all the big ones. Were they good? I started to say at dinner time, "they are the best fish I ever ate," but Mrs. Root inter-

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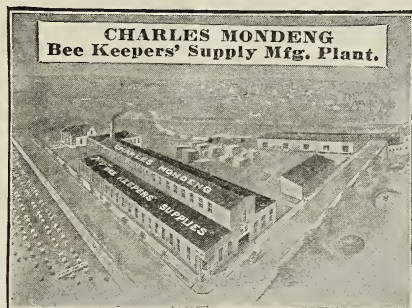
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## Around the Office—Continued

rupted me by saying I had used that expression so often it had lost its effect."

There ain't much to add to a fish story of that size, only it seems to me dear old Mrs. A. I. Root is apparently on to "Uncle Amos" bigger'n a elephant when he gets to talkin' about fish in any way.

\*\*\*

Now, while I have just had to let A. I. Root into this department for oncet on account of his poachin' on my fishin' preserves in Gleanin's, I want to clean up with him and get shut of the subject. It ain't that I want to pick on him either. I don't pick onto the Roots any more than just so as I can look freedom, free speech and the American flag in the face without blushin'. The Roots are ambushed along my breadline, and I ain't much for gettin' disconnected with fairly regglar and dependable food supplies. Old man Solomon was onto the racket when he got off that one about "the curse of a poor feller is his poorness." He had probably just seen some one like me, hired out, and not any braver than he figgered he dared to be, but wantin' to be more so the durndest. Let's see, tho, I was talkin' about somethin' else. It was about gettin' thru with A. I. Root in this M.-A.-O. dept. oncet and for all. There is one thing he's got to stop doin'. Anyway, R. F. Holtermann of Canady says he's got to. That's inducin' beekeepers to stray off into the goat-keepin' business. Holtermann was around the office here the other day, and I heard him tellin' how it had raised the very deuce and all with one of his beekeepin' neighbors. He said this neighbor was a desciple of A. I. Root, and got to readin' that goat stuff in Gleanin's, and went and bought two goats. Well, this prospective goat millionaire, who was a superintendent of some big concern and generally away from home at work all day, went away to work one mornin' last fall leavin' his two Williams staked out near his apiary of which he was awful proud too. They were both chained to a ring in the top

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# Around the Office—Continued

of one stake that was driven into the ground. They weren't supposed to move that stake any. They were feedin' out around from the stake, as goats do—nibble and pull, nibble and pull—till they got to the ends of their chains and all the grass there was eat up. But they kept on pullin' after they had got thru nibblin'—till the stake pulled out of the ground. Then they fed along peaceful, chained together you see, of course. Of course, too, they fed right towards the bees. The devil never misses no such chance as to get a goat pointed wrong. No, siree, he don't. Of course, again, those two goats fed up straddle the first hive they come to, one on each side of it, and the chain twist 'em draggin' up to the side of that hive. Well, as them two goats fed on past the hive and the chain tightened up agin the hive and he goats kept goin' ahead, it didn't take no ivil engineer to see that that hive was ither goin' to stand up or tip over. Well, it tipped over. Holtermann says the way hem bees boiled out has left a record for ad bees in Canady. He says they seemed

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## Around the Office - Continued

irritated as agin the goats, and began showin' it right away. That was just where a doggasted lot of stingin' bees, knowin' nothin' about goats and hot headed both ends,—opened up the wrong package for oncet, so they did. A goat ain't much for turnin' one cheek to be stung just after the other one has been stung. Not so anybody can notice it he ain't. He is just as peaceful as anybody else till he ain't so and when he ain't he ain't nowise that way. He's for just plain and unendin' war then. He's a good shot, too. Any of you readers that's ever been standin' back and more to him trustin' in his peacefulness when he has suddenly declared war in his heart without givin' due notice, know whether he can hit a stationary mark or not. Well, them hives was stationary. The two goats, chained up as they were, began doin' team work on 'em, first takin' the one they had tipped over and whose bees had commenced the row. Holtermann says it was just as pretty work as ever you see. They went over the top side and side, and struck that first hive with that jump-and-side-curve swing of theirs kerplunk! Well, sir, all that was left of that hive was some disjointed boards, smashed combs, smashed frames, fozzled brood et cettery, and about 50,000 thousand of the most surprised bees in North Ameriky. By gosh, they were surprised! They weren't lookin' for no such response as that to their humble efforts. They never afore had got any such complete results as that and so promptitudinously. Neither moreover and likewise had they ever seen the game played that way before. They just seemed to lay off and begin examinin' one another's stingers for each other to see if they were real stingers any more. But did them goats hesitate? They did not. They had enlisted for the entire duration of hostilities, seemin'ly, and in just plain busi-

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## Around the Office—Continued

ness fashion they pushed the campaign right ahead to the next hive. Another of their side-curve jumps right together, and there was more splinters, and another colony of bees was out of house and provisions and some disconcerted, too. It was all so sudden with 'em. Holtermann says darn if them goats didn't take just 20 out of them 23 hives, one after another, butt-bang-splinters-and-honey, and would have butted the other three into the middle of the next week, if the poor beekeeper's wife standin' on the side lines hadn't a finally stopped wringin' her hands and moanin' long enough to send a sympathizin' neighbor who got on the scene down the road a ways to a old bee-keeper for help. He came runnin', a bee veil, overcoat, gloves and two pairs of trousers on, and finally got a holt of the chain that linked those two earnest, hard-workin' goats together, and pulled 'em off the job. He had to pull some, too, for them goats had got their eyes lit up with victory and high purpose by that time, and they was lackin' only about two minutes of showin' some miscalculatin' Ontario bees what a clean job looks like; also what bees can accomplish by urgin' goats on.

There ain't much moral to extract from this sorrowin' scene except that A. I. Root better draw in his horns on advisin' bee-keepers about goats too much; also that it's

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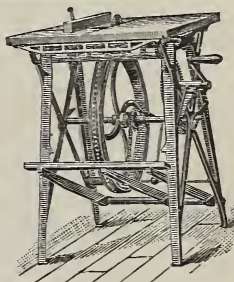
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## Around the Office—Continued

about the first time durin' all history that any kind of human—even the poor, down-treadin' beekeeper kind—has found the sort of occasion when he would like to be the goat.

\*\*\*

I'm gettin' so long winded, I don't get around to treat on half the subjects put up for my consideration and reflexion. I meant to give my friend (it ain't HE that ain't my friend in his family) J. L. Byer a good deal of a discourse as to what a feller is to do when he wants to do somethin' and daresn't, because he's afraid of his wife. I know, I do. He's come to the head fountain source of information exactly for instruction concernin' this dangerous topic. No man livin' is better authority than a man who loves fishin' and whose wife don't but does love good garden sass and industry. I shan't give my treatise on "How to Fool Your Wife" in this Gleanin's, friend Byer. There ain't time or space after givin' so much to A. I. Root and two goats. But seein' you are thinkin' along this line, I want to save you possible complications by jest sayin' this right here: If you ain't good at foolin' a wife, don't try it not oncet even. As I've got so I say to my fishin' friend, Ab. Lutz, when he comes along flourishin' a fish pole back side of my garden, when I'm hoein': "Ab, I better hoe right here all summer than to get caught lyin' again." That's so, too, Mr. Byer.

\*\*\*

"Being without Gleanings is like having your wife away from home."—W. U. Bleasdale, Conneaut, O. Gosh! I wonder if that feller Bleasdale likes Gleanin's?

\*\*\*

I ain't ever done anythin', as I am knowin' to, to Freeman B. Reeder, of Shamokin, Pa., that he should want to see me all clawed up, crunched together and strewn round promiscuous all to pieces. Yet he sends this

suggestion along: "I can't wait till M.-A.-O. gives that dear and grand old-young man, Dr. Miller, a most hearty shaking-up among the ads. of Gleanings. I think it would help keep him with us much longer." Yes, that's all right, but what I want to know is, would it be likely to help keep me with us much longer? As I have heretofore said, I would like to see some disputatious sunof-a-gon put on the gloves and lock horns with Dr. Miller. But as for myself I ain't a candidate or a darkhorse even. I am for peace continuous right along with the old apicultural lion of Marengo. But I'll help egg on any rumpus that anybody else anywhere wants to start with him.

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